

If you have questions regarding this document, please contact the Transportation Engineering Division by e-mail at [transportationengineering@fremont.gov](mailto:transportationengineering@fremont.gov) or by phone at 510-494-4745.



# **FINAL REPORT**

## **FOR THE ENGINEERING AND TRAFFIC SURVEY FOR SPEED LIMITS**

October 2008

**Prepared by:**



Kimley-Horn  
and Associates, Inc.

**CERTIFICATION**

I, Brian E. Sowers, do hereby certify that this Engineering and Traffic Survey for the City of Fremont was performed under my supervision. I certify that I am experienced in performing surveys of this type and duly registered in the State of California as a professional Civil Engineer.

---

Brian E. Sowers  
06/30/2010

RCE# 60296

# TABLE OF CONTENTS

<b>Table of Contents .....</b>	<b>i</b>
<b>1.0 Introduction .....</b>	<b>1</b>
1.1 Regulations and Guidelines.....	1
1.2 Requirements and Methodology of an Engineering and Traffic Study .....	3
<b>2.0 Speed Survey Evaluation.....</b>	<b>4</b>
2.1 Field Review .....	7
2.2 Statistical Analysis Factors .....	8
2.3 2006 California MUTCD Guidance between Adjacent Segments.....	9
2.4 Collision History .....	9
<b>3.0 Results And Recommendations.....</b>	<b>11</b>
Albrae Street between Stevenson Boulevard and Christy Street .....	26
Alvarado Boulevard between Deep Creek Road and City Limits .....	28
Ardenwood Boulevard between Union City Limit and Newark City Limit.....	29
Argonaut Way between Mowry Avenue and Walnut Avenue .....	30
Auto Mall Parkway between Westerly End and Interstate 680 .....	31
Bayside Parkway between Warren Avenue and Bayview Drive .....	33
Bayview Drive between Lakeview Boulevard and Fremont Boulevard .....	34
Beacon Avenue between Fremont Boulevard and Liberty Street.....	35
Blacow Road between Fremont Boulevard and Thornton Avenue .....	36
Boscell Road between Stewart Avenue and Bunche Drive.....	38
Boyce Road between Stevenson Boulevard and Auto Mall Parkway.....	40
Business Center Drive between Grimmer Boulevard and Technology Drive .....	41
Capitol Avenue between Paseo Padre Parkway and State Street.....	42
Central Avenue between Fremont Boulevard and Interstate 880 .....	43
Christy Street between Stewart Avenue and Brandin Court .....	45
Civic Center Drive between Mowry Avenue and Stevenson Boulevard .....	47
Commerce Drive between Ardenwood Boulevard and Paseo Padre Parkway .....	49
Country Drive between Fremont Boulevard and Paseo Padre Parkway .....	50
Curie Street between Christy Street and Boscell Road .....	51
Cushing Parkway between Auto Mall Parkway and Fremont Boulevard .....	52
Decoto Road between City Limits and Interstate 880 .....	54
Deep Creek Road between Ridgewood Drive and Alvarado Boulevard.....	56
Driscoll Road between Mission Boulevard and Washington Boulevard .....	58
Dumbarton Circle between Paseo Padre Parkway and Kaiser Drive.....	60
Durham Road between Interstate 680 and Mission Boulevard .....	61
Dusterberry Way between Central Avenue and Thornton Avenue .....	62
Fremont Boulevard between Beard Road and Lakeview Boulevard .....	63
Gallaudet Drive between Walnut Avenue and Stevenson Boulevard.....	68
Gateway Boulevard between Fremont Boulevard and Lakeview Boulevard .....	69
Grimmer Boulevard between Paseo Padre Parkway (South End) and Paseo Padre Parkway (North End).....	70
Guardino Drive between Mowry Avenue and Stevenson Boulevard .....	74
Hansen Avenue between Blacow Road and Dusterberry Way.....	75
Hastings Street between Country Drive and Capitol Avenue.....	77
High Street between Grimmer Boulevard and Chapel Way.....	78
Irvington Avenue between Grimmer Boulevard and Fremont Boulevard .....	79
Isherwood Way between Paseo Padre Parkway and City Limits .....	80
Kaiser Drive between Paseo Padre Parkway and Ardenwood Boulevard.....	81
Kato Road between Milmont Drive and Warm Springs Boulevard.....	82
Lakeview Boulevard between West Warren Avenue and Fremont Boulevard .....	84
Landing Parkway between Fremont Boulevard and West Warren Avenue .....	85

Liberty Street between Stevenson Boulevard and Capitol Avenue .....	86
Lowry Road between Alvarado Boulevard and City Limits .....	88
Milmont Drive between Page Avenue and City Limits .....	90
Mission Boulevard between Mission Road and St. Joseph's Terrace.....	91
Mowry Avenue between Paseo Padre Parkway and Interstate 880 .....	93
Niles Boulevard between City Limits and Hillview Drive .....	95
Nobel Drive/Bunche Drive between Auto Mall Parkway and Boscell Road .....	97
Old Canyon Road between Niles Canyon Road and Clarke Drive.....	98
Old Warm Springs Boulevard between Fremont Boulevard and South Grimmer Boulevard.....	99
Osgood Road between Washington Boulevard and South Grimmer Boulevard .....	100
Overacker Avenue between Mowry Avenue and Walnut Avenue .....	102
Pacific Commons Boulevard between Auto Mall Parkway and Curie Street.....	103
Page Avenue between Kato Road and Milmont Drive .....	104
Paseo Padre Parkway between City Limits and Curtner Road .....	105
Peralta Boulevard between Fremont Boulevard and Dusterberry Way .....	112
Pickering Avenue between Mission Boulevard and Easterly End.....	113
Pine Street between Ibero Way and Sabercat Road.....	114
Rancho Arroyo Parkway between Niles Boulevard and Riviera Drive .....	116
Sabercat Road between Durham Road and Northerly End .....	117
Scott Creek Road between Warm Springs Boulevard and Easterly End.....	118
Shinn Street between Peralta Boulevard and Von Euw Common .....	120
State Street between Mowry Avenue and Beacon Avenue.....	121
Stevenson Boulevard between Mission Boulevard and Westerly End .....	122
Sundale Drive between Liberty Street and Fremont Boulevard .....	125
Technology Drive between Auto Mall Parkway and Grimmer Boulevard .....	126
Technology Place between Business Center Drive and Technology Drive .....	127
Thornton Avenue between Fremont Boulevard and Paseo Padre Parkway .....	128
Vargas Road between Interstate 680 and 550' North of Pico Road .....	129
Walnut Avenue between Argonaut Way and Mission Boulevard .....	130
Warm Springs Boulevard between South Grimmer Boulevard and City Limits.....	132
East Warren Avenue between Warm Springs Boulevard and Curtner Road.....	134
West Warren Avenue between Interstate 880 and Fremont Boulevard .....	135
Washington Boulevard between Driscoll Road and Mission Boulevard .....	136

## List of Tables

Table 1: Survey Locations and Limits Evaluated by Kimley-Horn.....	4
Table 2: 2006 California State Highways Collision Rates.....	10
Table 3: Speed Survey Recommendations.....	11

## 1.0 INTRODUCTION

This Engineering and Traffic Survey is intended to serve as the basis for the establishment and enforcement of speed limits for selected streets within the City of Fremont. This survey was authorized by the City and independently conducted by the private consulting firm Kimley-Horn and Associates, Inc (Kimley-Horn).

Engineering and traffic surveys for speed limits are regularly conducted once every five (5) years by governing municipalities for the purpose of complying with Section 40802(a) of the *California Vehicle Code (CVC)* and the national *Uniform Vehicle Code*. Engineering and traffic surveys may be extended to every seven (7) years if criteria is met, or every ten (10) years if a registered engineer evaluates the section of the highway and determines that no significant changes in roadway or traffic conditions have occurred as specified in Section 40802(c) of the *California Vehicle Code (CVC)*. In addition, an engineering and traffic survey should be conducted on newly constructed roadways or roadways where the roadway conditions have significantly changed.

### 1.1 Regulations and Guidelines

Division 11, Chapter 7, of the 2008 California Vehicle Code defines the California Speed Laws. Section 22352 of the CVC indicates that prima facie speed limits are 15 miles per hour (mph) at unprotected railroad grade crossings, highway intersections with site restrictions, and on any alley. In addition, the prima facie speed limit is 25 mph in residential and business districts, when approaching or passing a school building or grounds thereof or when passing a senior center or other facility primarily used by senior citizens. Division 1 of the CVC defines a business district and residence district in Section 235 and 515, respectively.

“A ‘business district’ is that portion of a highway and the property contiguous thereto (a) upon one side of which highway, for a distance of 600 feet, 50 percent or more of the contiguous property fronting thereon is occupied by buildings in use for business, or (b) upon both sides of which highway, collectively, for a distance of 300 feet, 50 percent or more of the contiguous property fronting thereon is so occupied. A business district may be longer than the distances specified in this section if the above ratio of buildings in use for business to the length of the highway exists.<sup>1</sup>”

“A ‘residence district’ is that portion of a highway and the property contiguous thereto, other than a business district, (a) upon one side of which highway, within a distance of a quarter of a mile, the contiguous property fronting thereon is occupied by 13 or more separate dwelling houses or business structures, or (b) upon both sides of which highway, collectively, within a distance of a quarter of a mile, the contiguous property fronting thereon is occupied by 16 or more separate dwelling houses or business structures. A residence district may be longer than one-quarter of a mile if the above ratio of separate dwelling houses or business structures to the length of the highway exists.<sup>2</sup>”

---

<sup>1</sup> California Department of Motor Vehicles, California Vehicle Code, Division 1, Section 235, 2008.

<sup>2</sup> California Department of Motor Vehicles, California Vehicle Code, Division 1, Section 515, 2008.

Section 22357(a) permits the establishment of speed limits greater than 25 mph based on the following text:

“Whenever a local authority determines upon the basis of an engineering and traffic survey that a speed greater than 25 miles per hour would facilitate the orderly movement of vehicular traffic and would be reasonable and safe upon any street other than a state highway otherwise subject to a prima facie limit of 25 miles per hour, the local authority may by ordinance determine and declare a prima facie speed limit of 30, 35, 40, 45, 50, 55, or 60 miles per hour or a maximum speed limit of 65 miles per hour, whichever is found most appropriate to facilitate the orderly movement of traffic and is reasonable and safe.”<sup>3</sup>

Therefore, the CVC allows local authorities to increase or decrease the prima facie limits by ordinance or resolution to appropriate limits as determined by an engineering and traffic survey. Posted speed limits not defined in the CVC or established by ordinance are not valid. The CVC requires that speed surveys must be performed with the use of radar or other electronic devices at locations where speed limits are to be enforced with the use of radar. The current survey must be completed within five years as specified in Section 40802(a); seven years as specified in Section 40802(c), or ten years as specified in Section 40802(c), of the date of the preceding survey. A survey allowed to expire passed the valid duration of the previous survey would constitute a speed trap as defined in Sections 40802(a) and 40802(b) of the CVC:

“(1) A particular section of a highway measured as to distance and with boundaries marked, designated, or otherwise determined in order that the speed of a vehicle may be calculated by securing the time it takes the vehicle to travel the known distance.

(2) A particular section of a highway with a prima facie speed limit that is provided by this code or by local ordinance under subparagraph (A) of paragraph (2) of subdivision (a) of Section 22352, or established under Section 22354, 22357, 22358, or 22358.3, if that prima facie speed limit is not justified by an engineering and traffic survey conducted within five years prior to the date of the alleged violation, and enforcement of the speed limit involves the use of radar or any other electronic device that measures the speed of moving objects. This paragraph does not apply to a local street, road, or school zone.

(b) (1) For purposes of this section, a local street or road is defined by the latest functional usage and federal-aid system maps submitted to the federal Highway Administration, except that when these maps have not been submitted, or when the street or road is not shown on the maps, a “local street or road” means a street or road that primarily provides access to abutting residential property and meets the following three conditions:

(A) Roadway width of not more than 40 feet.

---

<sup>3</sup> California Department of Motor Vehicles, California Vehicle Code, Division 11, Chapter 7, Section 22357(a), 2008.



- (B) Not more than one-half of a mile of uninterrupted length. Interruptions shall include official traffic control signals as defined in Section 445.
- (C) Not more than one traffic lane in each direction.

(2) For purposes of this section “school zone” means that area approaching or passing a school building or the grounds thereof that is contiguous to a highway and on which is posted a standard “SCHOOL” warning sign, while children are going to or leaving the school either during school hours or during the noon recess period. “School zone” also includes the area approaching or passing any school grounds that are not separated from the highway by a fence, gate, or other physical barrier while the grounds are in use by children if that highway is posted with a standard “SCHOOL” warning sign.<sup>4</sup>

## **1.2 Requirements and Methodology of an Engineering and Traffic Study**

Speed zones are primarily established to protect the public from the unreasonable behavior of reckless, unreliable, or otherwise dangerous drivers. Speed limits are generally established at or near the 85<sup>th</sup> percentile speed, which is defined as the speed at or below which 85 percent of traffic is moving. Speed limits established on this basis conform to the consensus of those who drive on the roadways as to what speed is reasonable and safe, and are not dependent on the judgment of one or a few individuals.

The Engineering and Traffic Survey, as defined in Section 627 of the CVC, must consider the prevailing speeds, collision records, pedestrian and bicycle activity, and roadway traffic and roadside conditions not readily apparent to the driver. Speed zones are also established to advise motorists of road conditions or hazards, which may not be readily apparent to a reasonable driver. For this reason, a field review of related road/traffic variables is conducted which is considered in combination with the statistical data and collision history of a particular roadway segment to determine a safe and reasonable speed limit. The specific procedures used in the performance of an Engineering and Traffic Study are outlined in the *2006 California MUTCD*. The statistical factors used to analyze the collected speed survey data and additional factors as noted in the *2006 California MUTCD* to consider are defined in the following section.

---

<sup>4</sup> California Department of Motor Vehicles, California Vehicle Code, Division 17. Chapter 2, Section 40802, 2008.

## 2.0 SPEED SURVEY EVALUATION

One hundred and thirty-seven (137) locations were evaluated by Kimley-Horn and included in this report. These roadway sections and limits of the sections are listed in Table 1.

**Table 1: Survey Locations and Limits Evaluated by Kimley-Horn**

NO	STREET	LIMIT 1	LIMIT 2
1	ALBRAE STREET	STEVENSON BOULEVARD	STEWART AVENUE
2	ALBRAE STREET	STEWART AVENUE	CHRISTY STREET
3	ALVARADO BOULEVARD	DEEP CREEK ROAD	CITY LIMITS
4	ARDENWOOD BOULEVARD	UNION CITY LIMIT	NEWARK CITY LIMIT
5	ARGONAUT WAY	MOWRY AVENUE	WALNUT AVENUE
6	AUTO MALL PARKWAY	WESTERLY END	BOYCE ROAD
7	AUTO MALL PARKWAY	BOYCE ROAD	I-880
8	AUTO MALL PARKWAY	I-880	FREMONT BOULEVARD
9	AUTO MALL PARKWAY	FREMONT BOULEVARD	I-680
10	BAYSIDE PARKWAY	WARREN AVENUE	BAYVIEW DRIVE
11	BAYVIEW DRIVE	LAKEVIEW BOULEVARD	FREMONT BOULEVARD
12	BEACON AVENUE	FREMONT BOULEVARD	LIBERTY STREET
13	BLACOW ROAD	FREMONT BOULEVARD	STEVENSON BOULEVARD
14	BLACOW ROAD	STEVENSON BOULEVARD	CENTRAL AVENUE
15	BLACOW ROAD	CENTRAL AVENUE	THORNTON AVENUE
16	BOSCELL ROAD	STEWART AVENUE	AUTO MALL PARKWAY
17	BOSCELL ROAD	AUTO MALL PARKWAY	BUNCHE DRIVE
18	BOYCE ROAD	STEVENSON BOULEVARD	AUTO MALL PARKWAY
19	BUSINESS CENTER DRIVE	GRIMMER BOULEVARD	TECHNOLOGY DRIVE
20	CAPITOL AVENUE	PASEO PADRE PARKWAY	STATE STREET
21	CENTRAL AVENUE	FREMONT BOULEVARD	BLACOW ROAD
22	CENTRAL AVENUE	BLACOW ROAD	I-880
23	CHRISTY STREET	STEWART AVENUE	AUTO MALL PARKWAY
24	CHRISTY STREET	AUTO MALL PARKWAY	BRANDIN COURT
25	CIVIC CENTER DRIVE	MOWRY AVENUE	WALNUT AVENUE
26	CIVIC CENTER DRIVE	WALNUT AVENUE	STEVENSON BOULEVARD
27	COMMERCE DRIVE	ARDENWOOD BOULEVARD	PASEO PADRE PARKWAY
28	COUNTRY DRIVE	FREMONT BOULEVARD	PASEO PADRE PARKWAY
29	CURIE STREET	CHRISTY STREET	BOSCELL ROAD
30	CUSHING PARKWAY	AUTO MALL PARKWAY	BUNCHE DRIVE
31	CUSHING PARKWAY	BUNCHE DRIVE	SOUTH END OF CAUSEWAY
32	CUSHING PARKWAY	SOUTH END OF CAUSEWAY	FREMONT BOULEVARD
33	DECOTO ROAD	CITY LIMITS	FREMONT BOULEVARD
34	DECOTO ROAD	FREMONT BOULEVARD	I-880
35	DEEP CREEK ROAD	PASEO PADRE PARKWAY	RIDGEWOOD DRIVE
36	DEEP CREEK ROAD	ALVARADO BOULEVARD	PASEO PADRE PARKWAY
37	DRISCOLL ROAD	PASEO PADRE PARKWAY	WASHINGTON BOULEVARD
38	DRISCOLL ROAD	PASEO PADRE PARKWAY	WASHINGTON BOULEVARD



**Table 1, continued: Survey Locations and Limits Evaluated by Kimley-Horn**

NO	STREET	LIMIT 1	LIMIT 2
39	DUMBARTON CIRCLE	PASEO PADRE PARKWAY	KAISER DRIVE
40	DURHAM ROAD	I-680	MISSION BOULEVARD
41	DUSTERBERRY WAY	CENTRAL AVENUE	THORNTON AVENUE
42	FREMONT BOULEVARD	BEARD ROAD	DECOTO ROAD
43	FREMONT BOULEVARD	DECOTO ROAD	THORNTON AVENUE
44	FREMONT BOULEVARD	PERALTA BOULEVARD	CENTRAL AVENUE
45	FREMONT BOULEVARD	CENTRAL AVENUE	MOWRY AVENUE
46	FREMONT BOULEVARD	MOWRY AVENUE	STEVENSON BOULEVARD
47	FREMONT BOULEVARD	STEVENSON BOULEVARD	WASHINGTON BOULEVARD
48	FREMONT BOULEVARD	WASHINGTON BOULEVARD	AUTO MALL PARKWAY
49	FREMONT BOULEVARD	AUTO MALL PARKWAY	I-880
50	FREMONT BOULEVARD	I-880	WARREN AVENUE
51	FREMONT BOULEVARD	WARREN AVENUE	LAKEVIEW BOULEVARD
52	GALLAUDET DRIVE	WALNUT AVENUE	STEVENSON BOULEVARD
53	GATEWAY BOULEVARD	FREMONT BOULEVARD	LAKEVIEW BOULEVARD
54	GRIMMER BOULEVARD (SOUTH)	PASEO PADRE PARKWAY	OSGOOD ROAD
55	GRIMMER BOULEVARD (SOUTH)	OSGOOD ROAD	FREMONT BOULEVARD
56	GRIMMER BOULEVARD (SOUTH)	FREMONT BOULEVARD	AUTO MALL PARKWAY
57	GRIMMER BOULEVARD	AUTO MALL PARKWAY	BLACOW ROAD
58	GRIMMER BOULEVARD	BLACOW ROAD	FREMONT BOULEVARD
59	GRIMMER BOULEVARD	FREMONT BOULEVARD	PASEO PADRE PARKWAY
60	GUARDINO DRIVE	STEVENSON BOULEVARD	MOWRY AVENUE
61	HANSEN AVENUE	BLACOW ROAD	YOLO TERRACE
62	HANSEN AVENUE	YOLO TERRACE	DUSTERBERRY WAY
63	HASTINGS STREET	CAPITOL AVENUE	COUNTRY DRIVE
64	HIGH STREET	GRIMMER BOULEVARD	CHAPEL WAY
65	IRVINGTON AVENUE	FREMONT BOULEVARD	GRIMMER BOULEVARD
66	ISHERWOOD WAY	PASEO PADRE PARKWAY	CITY LIMITS
67	KAISER DRIVE	ARDENWOOD BOULEVARD	PASEO PADRE PARKWAY
68	KATO ROAD	WARM SPRINGS BOULEVARD	MILMONT DRIVE
69	KATO ROAD	MILMONT DRIVE	AUBURN STREET
70	LAKEVIEW BOULEVARD	FREMONT BOULEVARD	WARREN AVENUE
71	LANDING PARKWAY	FREMONT BOULEVARD	WARREN AVENUE
72	LIBERTY STREET	STEVENSON BOULEVARD	WALNUT AVENUE
73	LIBERTY STREET	WALNUT AVENUE	CAPITOL AVENUE
74	LOWRY ROAD	ALVARADO BOULEVARD	LARK WAY
75	LOWRY ROAD	LARK WAY	CITY LIMITS
76	MILMONT DRIVE	PAGE AVENUE	CITY LIMITS
77	MISSION BOULEVARD	MISSION ROAD	ST. JOSEPHS TERRACE
78	MISSION BOULEVARD	ST. JOSEPHS TERRACE	PINE STREET

**Table 1, continued: Survey Locations and Limits Evaluated by Kimley-Horn**

NO	STREET	LIMIT 1	LIMIT 2
79	MISSION BOULEVARD	PINE STREET	DURHAM ROAD
80	MISSION BOULEVARD	DURHAM ROAD	CURTNER ROAD
81	MOWRY AVENUE	PERALTA BOULEVARD	PASEO PADRE PARKWAY
82	MOWRY AVENUE	PASEO PADRE PARKWAY	ARGONAUT WAY
83	MOWRY AVENUE	ARGONAUT WAY	I-880
84	NILES BOULEVARD	CITY LIMITS	ROCK AVENUE
85	NILES BOULEVARD	ROCK AVENUE	HILLVIEW DRIVE
86	NOBEL DRIVE/BUNCHE DRIVE	AUTO MALL PARKWAY	BOSCELL ROAD
87	OLD CANYON ROAD	CLARKE DRIVE	NILES CANYON ROAD
88	OLD WARM SPRINGS BOULEVARD	FREMONT BOULEVARD	GRIMMER BOULEVARD
89	OSGOOD ROAD	WASHINGTON BOULEVARD	AUTO MALL PARKWAY
90	OSGOOD ROAD	AUTO MALL PARKWAY	GRIMMER BOULEVARD
91	OVERACKER AVENUE	WALNUT AVENUE	MOWRY AVENUE
92	PACIFIC COMMONS BOULEVARD	AUTO MALL PARKWAY	CURIE STREET
93	PAGE AVENUE	KATO ROAD	MILMONT DRIVE
94	PASEO PADRE PARKWAY	CITY LIMITS	ARDENWOOD BOULEVARD
95	PASEO PADRE PARKWAY	ARDENWOOD BOULEVARD	FREMONT BOULEVARD
96	PASEO PADRE PARKWAY	FREMONT BOULEVARD	DECOTO ROAD
97	PASEO PADRE PARKWAY	DECOTO ROAD	THORNTON AVENUE
98	PASEO PADRE PARKWAY	THORNTON AVENUE	PERALTA BOULEVARD
99	PASEO PADRE PARKWAY	PERALTA BOULEVARD	MOWRY AVENUE
100	PASEO PADRE PARKWAY	MOWRY AVENUE	STEVENSON BOULEVARD
101	PASEO PADRE PARKWAY	STEVENSON BOULEVARD	DRISCOLL ROAD
102	PASEO PADRE PARKWAY	DRISCOLL ROAD	WASHINGTON BOULEVARD
103	PASEO PADRE PARKWAY	WASHINGTON BOULEVARD	QUEMA DRIVE
104	PASEO PADRE PARKWAY	QUEMA DRIVE	DURHAM ROAD
105	PASEO PADRE PARKWAY	DURHAM ROAD	GRIMMER BOULEVARD
106	PASEO PADRE PARKWAY	GRIMMER BOULEVARD	MISSION BOULEVARD
107	PASEO PADRE PARKWAY	MISSION BOULEVARD	CURTNER ROAD
108	PERALTA BOULEVARD	FREMONT BOULEVARD	DUSTERBERRY WAY
109	PICKERING AVENUE	MISSION BOULEVARD	EASTERLY END
110	PINE STREET	IBERO WAY	PASEO PADRE PARKWAY
111	PINE STREET	PASEO PADRE PARKWAY	SABERCAT ROAD
112	RANCHO ARROYO PARKWAY	NILES BOULEVARD	RIVIERA DRIVE
113	SABERCAT ROAD	DURHAM ROAD	NORTHERLY END
114	SCOTT CREEK ROAD	WARM SPRINGS BOULEVARD	GREEN VALLEY ROAD
115	SCOTT CREEK ROAD	GREEN VALLEY ROAD	EASTERLY END
116	SHINN STREET	PERALTA BOULEVARD	VON EUW COMMON
117	STATE STREET	BEACON AVENUE	MOWRY AVENUE
118	STEVENSON BOULEVARD	MISSION BOULEVARD	CIVIC CENTER DRIVE
119	STEVENSON BOULEVARD	CIVIC CENTER DRIVE	FREMONT BOULEVARD

**Table 1, continued: Survey Locations and Limits Evaluated by Kimley-Horn**

NO	STREET	LIMIT 1	LIMIT 2
120	STEVENSON BOULEVARD	FREMONT BOULEVARD	BLACOW ROAD
121	STEVENSON BOULEVARD	BLACOW ROAD	I-880
122	STEVENSON BOULEVARD	I-880	WESTERLY END
123	SUNDALE DRIVE	LIBERTY STREET	FREMONT BOULEVARD
124	TECHNOLOGY DRIVE	AUTO MALL PARKWAY	GRIMMER BOULEVARD
125	TECHNOLOGY PLACE	TECHNOLOGY DRIVE	BUSINESS CENTER DRIVE
126	THORNTON AVENUE	FREMONT BOULEVARD	PASEO PADRE PARKWAY
127	VARGAS ROAD	I-680	550' NORTH OF PICO ROAD
128	VARGAS ROAD	MORRISON CANYON ROAD	550' NORTH OF PICO ROAD
129	WALNUT AVENUE	ARGONAUT WAY	FREMONT BOULEVARD
130	WALNUT AVENUE	FREMONT BOULEVARD	PASEO PADRE PARKWAY
131	WALNUT AVENUE	PASEO PADRE PARKWAY	MISSION BOULEVARD
132	WARM SPRINGS BOULEVARD	GRIMMER BOULEVARD	WARREN AVENUE
133	WARM SPRINGS BOULEVARD	WARREN AVENUE	CITY LIMITS
134	EAST WARREN AVENUE	CURTNER ROAD	WARM SPRINGS BOULEVARD
135	WEST WARREN AVENUE	I-880	FREMONT BOULEVARD
136	WASHINGTON BOULEVARD	DRISCOLL ROAD	PASEO PADRE PARKWAY
137	WASHINGTON BOULEVARD	PASEO PADRE PARKWAY	MISSION BOULEVARD

## 2.1 Field Review

Speed data was collected using manual radar surveys and were performed by a sub-consultant to Kimley-Horn, All Traffic Data, Inc. (ATD). Each of the radar speed checks were made from an inconspicuously parked, unmarked vehicle. An effort was made to ensure that the presence of the vehicle in no way affected the speed of the traffic being surveyed. Field information from these speed surveys and other roadway characteristics were recorded on field data forms and later coded into engineering software for analysis purposes. Chapter 2B of the *2006 California MUTCD* indicates that it is desirable to have a minimum sample of 100 vehicles for a speed zone survey for an arterial street. This may result in excessive survey periods for low volume roadways, but a survey should not contain less than 50 vehicles. In addition, average daily traffic volumes (ADT) were collected at all the locations.

Examples of the field data collected for the purposes of analyzing related roadway characteristics as they pertain to the determination of appropriate speed limits are listed below. The results of the field review for related roadway and traffic variables are summarized in the Engineering and Traffic Survey forms included the **Appendix**.

1. Segment length, width and alignment;
2. Level of pedestrian and bicycle activity, truck volume
3. Traffic flow characteristics;
4. Number of lanes and other channelization/striping factors;
5. Frequency of intersections, driveways, on-street parking, bike lanes;
6. Locations of stop signs, traffic signals, and other regulatory traffic control devices;
7. Roadway condition, bumps and dips;

8. Obstructions to driver/pedestrian visibility;
9. Land use and proximity of schools, parks/recreation areas and senior centers;
10. Uniformity with existing speed zones in adjacent jurisdictions; and,
11. Any other unusual conditions or hazards not readily apparent to the driver.

## 2.2 Statistical Analysis Factors

Significant factors used to analyze the collected survey data are summarized below:

1. **85<sup>th</sup> Percentile Speed.** The Critical Speed, or the 85<sup>th</sup> percentile speed, is defined as that speed at or below which 85 percent of the traffic is moving. This factor is the primary guide in determining what speeds the majority of safe and reasonable drivers are traveling. Therefore, the practice is to set the speed limit to the nearest 5 mph increment from the critical speed unless other factors require a lower limit. Speed limits set on this basis provide law enforcement officials with a means of controlling reckless or unreliable drivers who will not conform to what the majority finds reasonable.
2. **The 10-mph Pace.** The 10-mph Pace is the 10-mph increment range, which contains the largest number of recorded vehicles. The pace is a measure of the dispersion of speeds within the sample surveyed. Speed limits should normally be set to fall within the 10-mph pace. However, conditions not readily apparent to the driver or adhering to State mandated limits such as in Residence Districts may require setting speed limits below the 10-mph pace.
3. **50<sup>th</sup> Percentile Speed.** The Median Speed, or 50th Percentile Speed, represents the mid-point value within the range of recorded speeds for a particular roadway location. In other words, 50 percent of the vehicles travel faster than and 50 percent travel slower than, the median speed. This value is another measure of the central tendency of the vehicle speed distribution. Typically speed limits should not be set below the 50<sup>th</sup> Percentile Speed, since it would result in greater than 50-percent of the drivers exceeding the speed limit.
4. **15<sup>th</sup> Percentile Speed.** The 15th Percentile Speed is that speed at or below which 15 percent of the vehicles are traveling. This value is important in determining the minimum allowable speed limit, given that the vehicles traveling below this speed tend to obstruct the flow of traffic, thereby increasing the collision potential.
5. **Percent of Vehicles in Pace Speed.** The percent of vehicles in the 10-mph pace speed is an indication of the grouping of vehicular speeds. Ideally, if all vehicles were traveling at or about the same speed, there would be a reduced likelihood of vehicular collisions. In speed limit analysis, the higher the percent of vehicles within the pace speed, the more favorable the speed distribution. The percent of the 10-mph pace is often between 60 and 90 percent.

## 2.3 2006 California MUTCD Guidance between Adjacent Segments

The Traffic Manual previously published by the California Department of Transportation previously set guidance on the preparation of Engineering and Traffic Surveys. Section 8-3.3 contained the guidance for establishing speed limits using an Engineering and Traffic Survey, and indicated that the speed limit should normally be established at the first five mile per hour increment below the 85<sup>th</sup> percentile speed<sup>5</sup>. However, with the change to the 2006 California MUTCD, the guidance for establishing speed limits has been modified and the new documentation indicates that “the speed limit should be established at the nearest 10 km/h (5 mph) increment to the 85<sup>th</sup> percentile speed of free-flowing traffic.”<sup>6</sup> This change in the guidance for establishing speed limits was incorporated into the analysis and recommendation of speed limits for this study. Both texts note that in matching existing conditions with the traffic safety needs of the community, engineering judgment may indicate the need for a reduction of the posted speed limit by 5 mph due to specific factors such as road characteristics, the pace speed, roadside development and environment, parking practices and pedestrian activity, and collision history. The following are some factors as noted in the 2006 California MUTCD to consider when establishing speed limits between adjacent street segments:

1. **Avoid Short Segments.** Short speed zones of less than ½ mile should be avoided, except in transition areas.
2. **Change in Roadway Conditions or Roadside Development.** Speed zone changes should be coordinated with changes in roadway conditions or roadside development.

A summary of the effect this change in guidance had on the recommended speed limits is included in the **Appendix**.

## 2.4 Collision History

The Engineering and Traffic Survey forms summarize the available collision information for each of the street segments. The collision information was obtained from the California Statewide Integrated Traffic Records System (SWITRS) Report for the City of Fremont from July 1, 2004 to June 30, 2007. The collisions were reviewed and corridor related collisions, those not related to signalized intersections, were summarized for each segment. Based on the number of total collisions studied over the 3 year period and ADT counts, a collision rate per million vehicle miles was calculated for each segment. To provide a general comparison of the collision rates on the segments to expected collisions rates for similar types of local roadways, the collision rates for each segment were compared to the statewide average rate listed in the 2006 Collision Data on California State Highways (road miles, travel, collisions, collision rates) as listed in Table 2.

---

<sup>5</sup> California Department of Transportation, Traffic Manual, Chapter 8, Section 03, Dec 1988.

<sup>6</sup> California Department of Transportation, 2006 California MUTCD, Chapter 2B, page 2B-7, 26 September 2006.



**Table 2: 2006 California State Highways Collision Rates**

<b>Lane Type</b>	<b>Total Collision Rate Per Million Vehicle Miles (3-Year Rates for July'2004-June'2007)</b>
2&3 Lanes	1.56
4 lanes (undivided highway)	2.51
4 lanes (divided highway)	1.89

### 3.0 RESULTS AND RECOMMENDATIONS

The recommendations contained in this report are intended to establish prima facie speed limits. Prima facie limits attempt to advise the motorist and enforcement of the reasonable speed for a particular section of roadway for the prevailing conditions. In many cases, the recommendations made produce a uniform speed limit along the road. As a result, the speed limits in adjacent jurisdictions were considered as well as along the various street segments surveyed within the City of Fremont.

The Engineering and Traffic Survey Sheets, presented in the **Appendix**, illustrate the results of a thorough evaluation of the available data and indicate a recommended speed limit for each of the street segments surveyed. A summary of the data analysis, along with recommended speed limits can be found in **Table 3** followed by descriptions of the recommendations for each roadway segment.

**Table 3: Speed Survey Recommendations**

Street Segment	Existing Speed Limit (mph)	Recom Speed Limit (mph)	85% Speed (mph)	Median Speed (mph)	10 mph Pace Range (mph)	% of Veh. In Pace	Justification
<b>Albrae Street</b> between Stevenson Boulevard and Stewart Avenue	25	30	34.9	29.6	27-36	70.6	85 <sup>th</sup> percentile speed downgraded due to collision rate, and roadway curvature
<b>Albrae Street</b> between Stewart Avenue and Christy Street	30	40	41.9	36.7	32-41	67.3	85 <sup>th</sup> percentile speed
<b>Alvarado Boulevard</b> between Deep Creek Road and City Limits	45	45	45.9	39.8	35-44	60.7	85 <sup>th</sup> percentile speed
<b>Ardenwood Boulevard</b> between Union City Limit and Newark City Limit	40	45	45.1	39.8	37-46	64.6	85 <sup>th</sup> percentile speed
<b>Argonaut Way</b> between Mowry Avenue and Walnut Avenue	30	30	37.0	32.3	27-36	70.9	85 <sup>th</sup> percentile speed downgraded due to horizontal curves, residential frontage and unsignalized pedestrian crosswalk
<b>Auto Mall Parkway</b> between Westerly end and Boyce Road	45	45	43.0	36.8	34-43	59.7	85 <sup>th</sup> percentile speed

**Table 3, continued: Speed Survey Recommendations**

Street Segment	Existing Speed Limit (mph)	Recom Speed Limit (mph)	85% Speed (mph)	Median Speed (mph)	10 mph Pace Range (mph)	% of Veh. In Pace	Justification
<b>Auto Mall Parkway</b> between Boyce Road and I-880	40	40	37.5	33.1	29-38	76.0	85 <sup>th</sup> percentile speed
<b>Auto Mall Parkway</b> between I-880 and Fremont Boulevard	45	45	45.1	39.9	36-45	68.2	85 <sup>th</sup> percentile speed
<b>Auto Mall Parkway</b> between Fremont Boulevard and I-680	45	45	45.4	40.0	35-44	62.0	85 <sup>th</sup> percentile speed
<b>Bayside Parkway</b> between Warren Avenue and+ Bayview Drive	35	35	37.9	31.9	28-37	67.0	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>Bayview Drive</b> between Lakeview Boulevard and Fremont Boulevard	35	35	38.8	30.6	26-35	58.1	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>Beacon Avenue</b> between Fremont Boulevard and Liberty Street	30	30	34.6	30.0	26-35	74.7	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>Blacow Road</b> between Fremont Boulevard and Stevenson Boulevard	40	40	47.1	41.4	38-47	62.3	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace, residential density, pedestrian activity from proximity to school, park and library
<b>Blacow Road</b> between Stevenson Boulevard and Central Avenue	40	40	44.6	40.3	35-44	75.0	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace, residential density and high pedestrian activity
<b>Blacow Road</b> between Central Avenue and Thornton Avenue	35/40	35	39.7	34.9	30-39	74.1	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace and fronting residential
<b>Boscell Road</b> between Stewart Avenue and Auto Mall Parkway	40	35	37.7	31.5	28-37	65.1	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace



**Table 3, continued: Speed Survey Recommendations**

Street Segment	Existing Speed Limit (mph)	Recom Speed Limit (mph)	85% Speed (mph)	Median Speed (mph)	10 mph Pace Range (mph)	% of Veh. In Pace	Justification
<b>Boscell Road</b> between Auto Mall Parkway and Bunche Drive	30	35	34.8	31.0	27-36	86.2	85 <sup>th</sup> percentile speed
<b>Boyce Road</b> between Stevenson Boulevard and Auto Mall Parkway	45	45	47.8	42.9	40-49	69.1	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace, and moderate truck traffic
<b>Business Center Drive</b> between Grimmer Boulevard and Technology Drive	40	40	39.6	33.3	31-40	50.9	85 <sup>th</sup> percentile speed
<b>Capitol Avenue</b> between Paseo Padre Parkway and State Street	30	30	35.3	29.3	25-34	67.5	85 <sup>th</sup> percentile speed downgrade due to the 10 mph pace
<b>Central Avenue</b> between Fremont Boulevard and Blacow Road	35	35	40.6	35.7	31-40	69.4	85 <sup>th</sup> percentile speed downgraded due to the fronting residential, uncontrolled crosswalks, moderate pedestrian activity and the 10 mph pace
<b>Central Avenue</b> between Blacow Road and I-880	35	40	43.5	37.6	36-45	67.9	85 <sup>th</sup> percentile speed downgraded due to short segment and adjacent segment speed limit
<b>Christy Street</b> between Stewart Avenue and Auto Mall Parkway	45	35	37.7	32.9	29-38	75.5	85 <sup>th</sup> percentile speed downgraded due to 10 mph pace
<b>Christy Street</b> between Auto Mall Parkway and Brandin Court	35	35	38.6	34.0	29-38	70.0	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>Civic Center Drive</b> between Mowry Avenue and Walnut Avenue	30	30	32.8	28.9	25-34	81.1	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>Civic Center Drive</b> between Walnut Avenue and Stevenson Boulevard	35	30	33.0	29.1	26-35	80.1	85 <sup>th</sup> percentile speed downgraded due to high pedestrian activity and the 10 mph pace

**Table 3, continued: Speed Survey Recommendations**

Street Segment	Existing Speed Limit (mph)	Recom Speed Limit (mph)	85% Speed (mph)	Median Speed (mph)	10 mph Pace Range (mph)	% of Veh. In Pace	Justification
<b>Commerce Drive</b> between Ardenwood Boulevard and Paseo Padre Parkway	35	35	39.4	33.7	28-37	66.2	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>Country Drive</b> between Fremont Boulevard and Paseo Padre Parkway	35	30	31.4	25.3	22-31	60.3	85 <sup>th</sup> percentile speed
<b>Curie Street</b> between Christy Street and Boscell Road	30	30	33.7	27.8	25-34	72.2	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>Cushing Parkway</b> between Auto Mall Parkway and Bunche Drive	40	40	44.2	37.4	34-43	56.3	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace and pedestrian activity
<b>Cushing Parkway</b> between Bunche Drive and South End of Causeway	40	45	48.1	43.3	38-47	75.0	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>Cushing Parkway</b> between South End of Causeway and Fremont Boulevard	45	45	45.0	40.4	37-46	69.6	85 <sup>th</sup> percentile speed
<b>Decoto Road</b> between City Limits and Fremont Boulevard	40	40	43.7	38.8	34-43	74.4	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>Decoto Road</b> between Fremont Boulevard and I-880	40	40	41.5	36.7	33-42	69.8	85 <sup>th</sup> percentile speed
<b>Deep Creek Road</b> between Paseo Padre Parkway and Ridgewood Drive	30	30	34.0	29.0	23-32	75.2	85 <sup>th</sup> percentile speed downgraded due to the high collision rate, 10 mph pace and pedestrian activity
<b>Deep Creek Road</b> between Alvarado Boulevard and Paseo Padre Parkway	30	35	41.9	35.7	31-40	66.4	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace, high pedestrian activity, residential density, location of a nearby school and park

**Table 3, continued: Speed Survey Recommendations**

Street Segment	Existing Speed Limit (mph)	Recom Speed Limit (mph)	85% Speed (mph)	Median Speed (mph)	10 mph Pace Range (mph)	% of Veh. In Pace	Justification
<b>Driscoll Road</b> between Mission Boulevard and Paseo Padre Parkway	40	40	41.8	37.0	33-42	70.6	85 <sup>th</sup> percentile speed
<b>Driscoll Road</b> between Paseo Padre Parkway and Washington Boulevard	40	40	43.1	39.0	35-44	78.9	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace, adjacent segment speed and residential density
<b>Dumbarton Circle</b> between Paseo Padre Parkway and Kaiser Drive	35	40	44.6	34.3	26-35	56.3	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>Durham Road</b> between I-680 and Mission Boulevard	40	40	40.7	37.7	32-41	83.2	85 <sup>th</sup> percentile speed
<b>Dusterberry Way</b> between Central Avenue and Thornton Avenue	30	35	36.7	32.1	28-37	72.5	85 <sup>th</sup> percentile speed
<b>Fremont Boulevard</b> between Beard Road and Decoto Road	40	40	36.2	32.1	28-37	85.5	85 <sup>th</sup> percentile speed increased to be consistent with the adjacent segment between Decoto Road and Thornton Avenue
<b>Fremont Boulevard</b> between Decoto Road and Thornton Avenue	40	40	41.8	37.6	34-43	81.5	85 <sup>th</sup> percentile speed
<b>Fremont Boulevard</b> between Peralta Boulevard and Central Avenue	30	30	34.2	29.8	26-35	82.8	85 <sup>th</sup> percentile speed downgraded to be consistent with the adjacent segment between Decoto Road and Thornton Avenue
<b>Fremont Boulevard</b> between Central Avenue and Mowry Avenue	35	35	40.3	35.9	32-41	82.5	85 <sup>th</sup> percentile speed downgraded due to pedestrian activity, location of nearby schools and residential density
<b>Fremont Boulevard</b> between Mowry Avenue and Stevenson Boulevard	35/40	40	45.7	41.3	37-46	80.7	85 <sup>th</sup> percentile speed downgraded due to adjacent segment, recommended speed limits, and pedestrian activity

**Table 3, continued: Speed Survey Recommendations**

Street Segment	Existing Speed Limit (mph)	Recom Speed Limit (mph)	85% Speed (mph)	Median Speed (mph)	10 mph Pace Range (mph)	% of Veh. In Pace	Justification
<b>Fremont Boulevard</b> between Stevenson Boulevard and Washington Boulevard	35	35	41.5	37.4	34-43	86.0	85 <sup>th</sup> percentile speed downgraded due to moderate pedestrian activity, surrounding residential land uses and uncontrolled pedestrian crosswalks
<b>Fremont Boulevard</b> between Washington Boulevard and Auto Mall Parkway	35	40	41.0	36.3	33-42	86.0	85 <sup>th</sup> percentile speed
<b>Fremont Boulevard</b> between Auto Mall Parkway and I-880	45	45	47.4	42.7	38-47	77.0	85 <sup>th</sup> percentile speed
<b>Fremont Boulevard</b> between I-880 and Warren Avenue	35/40	45	43.7	39.3	35-44	80.2	85 <sup>th</sup> percentile speed
<b>Fremont Boulevard</b> between Warren Avenue and Lakeview Boulevard	40	45	47.6	41.1	36-45	71.7	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>Gallaudet Drive</b> between Walnut Avenue and Stevenson Boulevard	30	35	40.1	34.7	30-39	67.4	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace, location of a nearby school for the Deaf and the Blind
<b>Gateway Boulevard</b> between Fremont Boulevard and Lakeview Boulevard	40	35	39.8	33.7	29-38	70.3	85 <sup>th</sup> percentile speed downgraded due to 10 mph pace
<b>Grimmer Boulevard (South)</b> between Paseo Padre Parkway and Osgood Road	35	40	42.7	38.7	35-44	79.7	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>Grimmer Boulevard (South)</b> between Osgood Road and Fremont Boulevard	40	40	44.6	40.3	36-45	77.8	85 <sup>th</sup> percentile speed downgraded due to adjacent road speed limit
<b>Grimmer Boulevard (South)</b> between Fremont Boulevard and Auto Mall Parkway	40	40	43.5	39.1	35-44	76.3	85 <sup>th</sup> percentile speed downgraded due to adjacent segment and high pedestrian activity

**Table 3, continued: Speed Survey Recommendations**

Street Segment	Existing Speed Limit (mph)	Recom Speed Limit (mph)	85% Speed (mph)	Median Speed (mph)	10 mph Pace Range (mph)	% of Veh. In Pace	Justification
<b>Grimmer Boulevard</b> between Auto Mall Parkway and Blacow Road	40	40	45.2	40.5	37-46	78.0	85 <sup>th</sup> percentile speed downgraded due to adjacent segment and high pedestrian activity
<b>Grimmer Boulevard</b> between Blacow Road and Fremont Boulevard	35/40	40	44.0	39.2	35-44	77.0	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace and high pedestrian activity
<b>Grimmer Boulevard</b> between Fremont Boulevard and Paseo Padre Parkway	35	35	39.1	34.8	31-40	84.0	85 <sup>th</sup> percentile speed downgraded due to residential density and moderate pedestrian activity
<b>Guardino Drive</b> between Stevenson Boulevard and Mowry Avenue	25/30	30	33.6	29.3	25-34	80.5	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace and moderate pedestrian activity
<b>Hansen Avenue</b> between Blacow Road and Yolo Terrace	35	35	37.3	31.8	27-36	67.0	85 <sup>th</sup> percentile speed
<b>Hansen Avenue</b> between Yolo Terrace and Dusterberry Way	25	25	28.1	24.3	20-29	86.0	85 <sup>th</sup> percentile speed downgraded due to high accident rate and the 10 mph pace
<b>Hastings Street</b> between Capitol Avenue and Country Drive	30	30	29.5	25.6	21-30	84.0	85 <sup>th</sup> percentile speed
<b>High Street</b> between Grimmer Boulevard and Chapel Way	30	25	29.9	26.0	20-29	77.3	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace, higher than expected collision rate, and high pedestrian activity
<b>Irvington Avenue</b> between Fremont Boulevard and Grimmer Boulevard	30	30	33.6	28.9	26-35	77.3	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace, residential density and pedestrian activity
<b>Isherwood Way</b> between Paseo Padre Parkway and City Limits	35	35	37.6	33.7	30-39	80.0	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace

**Table 3, continued: Speed Survey Recommendations**

Street Segment	Existing Speed Limit (mph)	Recom Speed Limit (mph)	85% Speed (mph)	Median Speed (mph)	10 mph Pace Range (mph)	% of Veh. In Pace	Justification
<b>Kaiser Drive</b> between Ardenwood Boulevard and Paseo Padre Parkway	35	40	39.7	34.7	31-40	66.7	85 <sup>th</sup> percentile speed
<b>Kato Road</b> between Warm Springs Boulevard and Milmont Drive	40	40	38.5	33.9	31-40	74.3	85 <sup>th</sup> percentile speed
<b>Kato Road</b> between Milmont Drive and Auburn Street	35	40	43.9	39.1	35-44	66.0	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>Lakeview Boulevard</b> between Fremont Boulevard and Warren Avenue	35	35	41.7	35.3	31-40	65.5	85 <sup>th</sup> percentile speed downgraded due to 10 mph and to be consistent with adjacent speed limits
<b>Landing Parkway</b> between Fremont Boulevard and Warren Avenue	30	35	40.7	34.6	32-41	65.0	85 <sup>th</sup> percentile speed downgraded due to horizontal curvature
<b>Liberty Street</b> between Stevenson Boulevard and Walnut Avenue	30	30	36.0	31.8	28-37	86.4	85 <sup>th</sup> percentile speed downgraded due to high pedestrian activity and to be consistent with adjacent street segments
<b>Liberty Street</b> between Walnut Avenue and Capitol Avenue	30	30	35.3	32.0	28-37	94.2	85 <sup>th</sup> percentile speed downgraded due to high pedestrian activity and to be consistent with adjacent street segments
<b>Lowry Road</b> between Alvarado Boulevard and Lark Way	25	30	37.2	32.5	28-37	73.5	85 <sup>th</sup> percentile speed downgraded due to location of nearby school, church, parks and high pedestrian activity
<b>Lowry Road</b> between Lark Way and City Limits	35	40	42.6	37.5	33-42	75.0	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>Milmont Drive</b> between Page Avenue and City Limits	35	40	39.1	34.1	31-40	81.8	85 <sup>th</sup> percentile speed

**Table 3, continued: Speed Survey Recommendations**

Street Segment	Existing Speed Limit (mph)	Recom Speed Limit (mph)	85% Speed (mph)	Median Speed (mph)	10 mph Pace Range (mph)	% of Veh. In Pace	Justification
<b>Mission Boulevard</b> between Mission Road and St. Josephs Terrace	35	35	38.0	33.7	30-39	72.5	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>Mission Boulevard</b> between St. Josephs Terrace and Pine Street	35/40	35	35.5	30.9	28-37	76.3	85 <sup>th</sup> percentile speed
<b>Mission Boulevard</b> between Pine Street and Durham Road	40/45	45	47.7	42.8	40-49	72.3	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace and adjacent street speed limit
<b>Mission Boulevard</b> between Durham Road and Curtner Road	45	45	47.7	42.7	38-47	66.1	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace and adjacent street speed limit
<b>Mowry Avenue</b> between Peralta Boulevard and Paseo Padre Parkway	40	35	32.6	28.0	23-32	69.5	85 <sup>th</sup> percentile speed
<b>Mowry Avenue</b> between Paseo Padre Parkway and Argonaut Way	40	40	42.0	37.0	32-41	73.4	85 <sup>th</sup> percentile speed
<b>Mowry Avenue</b> between Argonaut Way and I-880	40	40	45.4	41.5	37-46	83.0	85 <sup>th</sup> percentile speed downgraded to be consistent with the adjacent street segment
<b>Niles Boulevard</b> between City Limits and Rock Avenue	35	40	43.6	39.5	35-44	79.5	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace and adjacent segment speed
<b>Niles Boulevard</b> between Rock Avenue and Hillview Drive	35/25	35	36.6	32.3	29-38	83.0	85 <sup>th</sup> percentile speed
<b>Nobel Drive/Bunche Drive</b> between Auto Mall Parkway and Boscell Road	N/A	35	38.5	32.6	30-39	70.3	85 <sup>th</sup> percentile speed downgraded due roadway curvature and the 10 mph pace

**Table 3, continued: Speed Survey Recommendations**

Street Segment	Existing Speed Limit (mph)	Recom Speed Limit (mph)	85% Speed (mph)	Median Speed (mph)	10 mph Pace Range (mph)	% of Veh. In Pace	Justification
<b>Old Canyon Road</b> between Clarke Drive and Niles Canyon Road	30	35	39.4	33.6	30-39	69.3	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace and location to a nearby park
<b>Old Warm Springs Boulevard</b> between Fremont Boulevard and Grimmer Boulevard	40	40	37.8	33.8	30-39	82.0	85 <sup>th</sup> percentile speed
<b>Osgood Road</b> between Washington Boulevard and Auto Mall Parkway	35	40	43.5	39.4	35-44	78.7	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>Osgood Road</b> between Auto Mall Parkway and Grimmer Boulevard	40	40	43.7	40.3	35-44	86.0	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>Overacker Avenue</b> between Walnut Avenue and Mowry Avenue	30	30	36.1	32.5	29-38	79.2	85 <sup>th</sup> percentile speed downgraded due to sharp horizontal curve and residential neighborhoods
<b>Pacific Commons Boulevard</b> between Auto Mall Parkway and Curie Street	25	30	32.0	26.3	23-32	83.3	85 <sup>th</sup> percentile speed
<b>Page Avenue</b> between Kato Road and Milmont Drive	35	30	28.1	24.2	19-28	71.7	85 <sup>th</sup> percentile speed
<b>Paseo Padre Parkway</b> between City Limits and Ardenwood Boulevard	45	45	51.5	45.6	43-52	62.5	85 <sup>th</sup> percentile speed downgraded due to moderate bike activity, unsignalized pedestrian crossings, and location of a nearby park
<b>Paseo Padre Parkway</b> between Ardenwood Boulevard and Fremont Boulevard	40/35	40	43.0	37.8	33-42	77.0	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace and residential frontage
<b>Paseo Padre Parkway</b> between Fremont Boulevard and Decoto Road	40	40	43.1	39.7	36-45	88.5	85 <sup>th</sup> percentile speed downgraded due to horizontal curve and moderate to high pedestrian activity



**Table 3, continued: Speed Survey Recommendations**

Street Segment	Existin g Speed Limit (mph)	Recom Speed Limit (mph)	85% Speed (mph)	Median Speed (mph)	10 mph Pace Range (mph)	% of Veh. In Pace	Justification
<b>Paseo Padre Parkway</b> between Decoto Road and Thornton Avenue	40	45	49.4	44.8	41-50	78.0	85 <sup>th</sup> percentile speed downgraded due to adjacent segment speed
<b>Paseo Padre Parkway</b> between Thornton Avenue and Peralta Boulevard	40	45	47.7	43.1	40-49	80.0	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>Paseo Padre Parkway</b> between Peralta Boulevard and Mowry Avenue	35	35	41.1	38.1	35-44	89.5	85 <sup>th</sup> percentile speed downgraded due to moderate pedestrian activity
<b>Paseo Padre Parkway</b> between Mowry Avenue and Stevenson Boulevard	35	35	34.5	30.6	26-35	82.0	85 <sup>th</sup> percentile speed
<b>Paseo Padre Parkway</b> between Stevenson Boulevard and Driscoll Road	35	35	41.0	36.5	32-41	81.0	85 <sup>th</sup> percentile speed downgraded by high pedestrian activity, location of nearby park
<b>Paseo Padre Parkway</b> between Driscoll Road and Washington Boulevard	30	35	41.0	35.5	30-39	71.2	85 <sup>th</sup> percentile speed downgraded due to high pedestrian activity, residential density, and roadway curvature.
<b>Paseo Padre Parkway</b> between Washington Boulevard and Quema Drive	30	35	40.0	36.1	31-40	78.5	85 <sup>th</sup> percentile speed downgraded due to residential frontages
<b>Paseo Padre Parkway</b> between Quema Drive and Durham Road	30	35	41.1	36.9	32-41	74.7	85 <sup>th</sup> percentile speed downgraded due to horizontal and vertical curves, the location of park, and to be consistent with the adjacent segment
<b>Paseo Padre Parkway</b> between Durham Road and Grimmer Boulevard	30	35	38.8	34.8	32-41	74.7	85 <sup>th</sup> percentile speed downgraded due to horizontal and vertical curvature of the roadway, and adjacent segment speed
<b>Paseo Padre Parkway</b> between Grimmer Boulevard and Mission Boulevard	30	35	39.9	35.9	33-42	67.7	85 <sup>th</sup> percentile speed downgraded by high pedestrian activity, and horizontal and vertical curvature of the roadway

**Table 3, continued: Speed Survey Recommendations**

Street Segment	Existing Speed Limit (mph)	Recom Speed Limit (mph)	85% Speed (mph)	Median Speed (mph)	10 mph Pace Range (mph)	% of Veh. In Pace	Justification
<b>Paseo Padre Parkway</b> between Mission Boulevard and Curtner Road	30	30	37.0	32.5	28-37	71.6	85 <sup>th</sup> percentile speed downgraded due to the horizontal curves and residential frontage
<b>Peralta Boulevard</b> between Fremont Boulevard and Dusterberry Way	30	35	34.7	30.4	27-36	84.0	85 <sup>th</sup> percentile speed
<b>Pickering Avenue</b> between Mission Boulevard and Easterly End	30	25	38.3	34.7	31-40	84.5	85 <sup>th</sup> percentile speed downgraded due to roadway width and residential density. Proposed speed limit is lower than existing due to residential street characteristics
<b>Pine Street</b> between Ibero Way and Paseo Padre Parkway	30	30	36.0	31.5	29-38	81.0	85 <sup>th</sup> percentile speed downgraded due to high pedestrian activity, residential neighborhoods, and horizontal and vertical curves
<b>Pine Street</b> between Paseo Padre Parkway and Sabercat Road	25	30	31.3	27.9	22-31	80.0	85 <sup>th</sup> percentile speed
<b>Rancho Arroyo Parkway</b> between Niles Boulevard and Riviera Drive	30	30	33.0	29.6	27-36	81.0	85 <sup>th</sup> percentile speed downgraded due to high collision rate
<b>Sabercat Road</b> between Durham Road and Northerly End	35	40	42.7	37.3	32-41	65.1	85 <sup>th</sup> percentile speed downgraded due to high accident rate and horizontal and vertical curvature of the roadway
<b>Scott Creek Road</b> between Warm Springs Boulevard and Green Valley Road	40	40	45.7	40.8	36-45	68.5	85 <sup>th</sup> percentile speed downgraded due to horizontal and vertical curves and bike lanes/activity
<b>Scott Creek Road</b> between Green Valley Road and Easterly End	35	35	41.0	35.3	31-40	53.8	85 <sup>th</sup> percentile speed downgraded due to higher than expected collision rate and curvature of the roadway

**Table 3, continued: Speed Survey Recommendations**

Street Segment	Existing Speed Limit (mph)	Recom Speed Limit (mph)	85% Speed (mph)	Median Speed (mph)	10 mph Pace Range (mph)	% of Veh. In Pace	Justification
<b>Shinn Street</b> between Peralta Boulevard and Von Euw Common	25	30	33.0	27.1	22-31	67.2	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>State Street</b> between Mowry Avenue and Beacon Avenue	30	30	34.2	29.9	25-34	79.0	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>Stevenson Boulevard</b> between Mission Boulevard and Civic Center Drive	35	40	43.1	37.6	34-43	69.3	85 <sup>th</sup> percentile speed downgraded due to moderate pedestrian activity, nearby park, and adjacent segment speed
<b>Stevenson Boulevard</b> between Civic Center Drive and Fremont Boulevard	35	40	40.0	35.5	31-40	77.1	85 <sup>th</sup> percentile speed
<b>Stevenson Boulevard</b> between Fremont Boulevard and Blacow Road	35	40	38.6	33.8	30-39	79.3	85 <sup>th</sup> percentile speed
<b>Stevenson Boulevard</b> between Blacow Road and I-880	35	40	39.8	34.8	31-40	69.2	85 <sup>th</sup> percentile speed
<b>Stevenson Boulevard</b> between I-880 and Westerly End	30/40	40	42.0	36.1	32-41	67.2	85 <sup>th</sup> percentile speed
<b>Sundale Drive</b> between Liberty Street and Fremont Boulevard	30	30	37.0	31.7	28-37	72.2	85 <sup>th</sup> percentile speed downgraded due to higher than expected collision rate
<b>Technology Drive</b> between Auto Mall Parkway and Grimmer Boulevard	25	30	36.0	25.5	27-36	71.7	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace and moderate pedestrian activity
<b>Technology Place</b> between Business Center Drive and Technology Drive	25	30	28.3	25.3	20-29	87.7	85 <sup>th</sup> percentile speed

**Table 3, continued: Speed Survey Recommendations**

Street Segment	Existing Speed Limit (mph)	Recom Speed Limit (mph)	85% Speed (mph)	Median Speed (mph)	10 mph Pace Range (mph)	% of Veh. In Pace	Justification
<b>Thornton Avenue</b> between Fremont Boulevard and Paseo Padre Parkway	30	35	34.7	31.0	27-36	87.3	85 <sup>th</sup> percentile speed
<b>Vargas Road</b> between I-680 and 550' North of Pico Road	30	35	37.1	30.7	27-36	69.2	85 <sup>th</sup> percentile speed
<b>Vargas Road</b> between Morrison Canyon Road and 550' North of Pico Road	25	25	31.4	23.3	21-30	82.4	85 <sup>th</sup> percentile speed downgraded due to roadway width and horizontal and vertical curvature
<b>Walnut Avenue</b> between Argonaut Way and Fremont Boulevard	30	30	35.7	30.8	27-36	73.2	85 <sup>th</sup> percentile speed, downgraded due to high collision rate
<b>Walnut Avenue</b> between Fremont Boulevard and Paseo Padre Parkway	35	35	35.0	34.4	31-40	69.2	85 <sup>th</sup> percentile speed
<b>Walnut Avenue</b> between Paseo Padre Parkway and Mission Boulevard	35	35	39.5	35.0	31-40	70.9	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace, high pedestrian activity and close proximity to the California School for the Deaf and the Blind
<b>Warm Springs Boulevard</b> between Grimmer Boulevard and Warren Avenue	40	40	41.7	37.0	34-43	70.7	85 <sup>th</sup> percentile speed
<b>Warm Springs Boulevard</b> between Warren Avenue and City Limits	45	45	48.0	43.2	39-48	71.0	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>East Warren Avenue</b> between Curtner Road and Warm Springs Boulevard	35	35	41.8	35.6	31-40	58.8	85 <sup>th</sup> percentile speed downgraded due to the horizontal and vertical curve, residential neighborhoods and the location of an uncontrolled school pedestrian crossing
<b>West Warren Avenue</b> between I-880 and Fremont Boulevard	35	35	37.1	32.6	29-38	72.3	85 <sup>th</sup> percentile speed



**Table 3, continued: Speed Survey Recommendations**

<b>Street Segment</b>	<b>Existing Speed Limit (mph)</b>	<b>Recom Speed Limit (mph)</b>	<b>85% Speed (mph)</b>	<b>Median Speed (mph)</b>	<b>10 mph Pace Range (mph)</b>	<b>% of Veh. In Pace</b>	<b>Justification</b>
<b>Washington Boulevard</b> between Driscoll Road and Paseo Padre Parkway	40/35	40	42.8	37.7	35-44	70.4	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace
<b>Washington Boulevard</b> between Paseo Padre Parkway and Mission Boulevard	35	40	42.7	37.2	33-42	69.1	85 <sup>th</sup> percentile speed downgraded due to the 10 mph pace

## Albrae Street between Stevenson Boulevard and Christy Street

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Stevenson Boulevard	Stewart Avenue	25 mph	30 mph	34.9 mph	15	2.90
Stewart Avenue	Christy Street	30 mph	40 mph	41.9 mph	4	1.29

### **Conditions**

For the purpose of this study, Albrae Street was separated into two (2) segments:

- Stevenson Boulevard to Stewart Avenue
- Stewart Avenue to Christy Street

Albrae Street, between Stevenson Boulevard and Stewart Avenue, is an undivided local road with a roadway width of approximately 44 feet. Approximately 1150 feet north of Stewart Avenue, the section is two lanes with no sidewalks and rest of the section is two lanes with a two-way turn lane and sidewalks. There is no parking and no bike lanes along the entire length of the segment. The posted speed limit is 25 mph. The roadway is flat and there are two ninety degree horizontal curves within the segment, which have 20 mph warning signs posted in both directions. The surrounding land use is commercial and the segment has low observed pedestrian and truck traffic. Albrae Street is signalized at Stevenson Boulevard. The roadway carries approximately 7,670 vehicles per day in the study area. A speed survey was conducted on April 11, 2008 and the 85<sup>th</sup> percentile speed was measured at 34.9 mph.

Albrae Street, between Stewart Avenue and Christy Street is striped for two lanes, undivided, with some sidewalks on both sides of the street except when the street runs adjacent to I-880 freeway. The road is approximately 44 feet wide. There is a stop sign where Albrae Street intersects Christy Street and the posted speed limit is 30 mph. This section of Albrae Street is a local road with mostly business frontage, some commercial, and a hotel. Parking is allowed on both sides of the street and there is no bike lane. The observed pedestrian activity and truck volume are both low for this segment. Albrae Street carries approximately 3,100 vehicles per day in the study area. A speed survey was conducted on March 17, 2008 and the 85<sup>th</sup> percentile speed was measured at 41.9 mph.

### **Comments and Recommendations**

Between Stevenson Boulevard and Stewart Avenue, the 85<sup>th</sup> percentile speed suggests a 35 mph speed limit. The collision rate is higher than the expected rate for this road type. The 10 mph pace is from 27 mph to 36 mph and the suggested speed limit falls within the top of this range. Due to the higher than expected collision rate and the ninety degree horizontal curves with posted warning signs of 20 mph, downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 30 mph.



Between Stewart Avenue and Christy Street, the 85<sup>th</sup> percentile speed indicates a 40 mph speed limit and the collision rate is below the expected rate for this road type. The 10 mph pace is from 32 mph to 41 mph. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit be increased to 40 mph.



### Alvarado Boulevard between Deep Creek Road and City Limits

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Deep Creek Road	City Limits	45 mph	45 mph	45.9 mph	7	1.60

#### **Conditions**

This segment of Alvarado Boulevard is striped for six lanes and is divided by a raised median. There are sidewalks and bike lanes in both directions along the segment. The width of the roadway varies from 105 to 125 feet and goes through a residential area. There is no parking along this segment. The intersection of Alvarado Boulevard and Deep Creek Road is signalized. The posted speed limit on Alvarado Boulevard is 45 mph. There are no horizontal curves, but there is a vertical curve as the road crosses over Alameda Creek. There are no driveways and low pedestrian activity and truck volumes were observed. Alvarado Boulevard carries approximately 31,340 vehicles per day in the study area. A speed survey was conducted on March 21, 2008 and the 85<sup>th</sup> percentile speed was measured at 45.9 mph.

#### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed indicates a speed limit of 45 mph and the collision rate is below the expected rate for this roadway type. The 10 mph pace ranges from 35 mph to 44 mph, and the suggested speed limit is just above this range. Based on the 85<sup>th</sup> percentile speed and the observed conditions, it is recommended that the posted speed limit along this section of Alvarado Boulevard remain at 45 mph.





## Ardenwood Boulevard between Union City Limit and Newark City Limit

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Union City Limit	Newark City limit	40 mph	45 mph	45.1 mph	9	0.47

### **Conditions**

This segment of Ardenwood Boulevard is a divided, approximately 80 to 90 feet wide road, and varies between four to five lanes. The posted speed limit is 40 mph, which turns into 35 mph after the SR-84 overcrossing. The land use is primarily non-fronting residential neighborhoods with a park/sports field on the east side of Ardenwood Boulevard and businesses on the west side. In between the Union City limit and Paseo Padre Parkway, it is primarily open space. There are a few driveways, mostly business entrances, and no on-street parking. There are bike lanes and sidewalks on both sides of the street for a majority of the segment. Ardenwood Boulevard has signalized intersections at Paseo Padre Parkway, Commerce Drive, and Kaiser Drive. There is a railroad overcrossing near SR-84. Ardenwood Boulevard carries approximately 14,525 vehicles per day in the study area. A speed survey was conducted on March 31, 2008 and the 85<sup>th</sup> percentile speed was measured at 45.1 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 45 mph speed limit and the collision rate is below the expected rate for this road type. The 10 mph pace ranges from 37 mph to 46 mph. Based on the 85<sup>th</sup> percentile speed, a posted speed limit of 45 mph is recommended.



## Argonaut Way between Mowry Avenue and Walnut Avenue

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Mowry Avenue	Walnut Avenue	30 mph	30 mph	37.0 mph	9	1.49

### **Conditions**

This segment of Argonaut Way is approximately 65 feet wide, striped for four lanes, and undivided. The posted speed limit is 30 mph and there are traffic signals at Sacramento Avenue and Mowry Avenue. The land use is residential frontage on the south side of the segment and commercial development on the north side. The segment has a few driveways and some parking on the south side of the street. After the signal at Sacramento Avenue, there is a warning speed limit sign of 20 mph for the horizontal curve that turns into Walnut Avenue. A pedestrian crossing is located near the end of Argonaut Way, where three streets intersect. Argonaut Way carries approximately 12,975 vehicles per day in the study area. A speed survey was conducted on March 26, 2008 and the 85<sup>th</sup> percentile speed was measured at 37.0 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a speed limit of 35 mph and the collision rate is below the expected rate for this type of roadway. The 10 mph pace is from 27 mph to 36 mph, so the 85<sup>th</sup> percentile speed falls in the high end of that range. Due to the horizontal curves, residential frontage, and unsignalized pedestrian crosswalk, downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain at 30 mph.

## Auto Mall Parkway between Westerly End and Interstate 680

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Westerly End	Boyce Road	45 mph	45 mph	43.0 mph	1	0.26
Boyce Road	Interstate 880	40 mph	40 mph	37.5 mph	13	0.92
Interstate 880	Fremont Boulevard	45 mph	45 mph	45.1 mph	45	0.97
Fremont Boulevard	Interstate 680	45 mph	45 mph	45.4 mph	10	0.30

### **Conditions**

For the purpose of this study, Auto Mall Parkway was separated into four (4) segments:

- Westerly End to Boyce Road
- Boyce Road to Interstate 880
- Interstate 880 to Fremont Boulevard
- Fremont Boulevard to Interstate 680

Between the Westerly End and Boyce Road, Auto Mall Parkway is a four lane road separated by a raised median between Boyce Road and Nobel Drive and a two lane road separated by a two-way turn lane west of Nobel drive. The surrounding land use includes industrial properties, business properties, office buildings, and open land. The road varies from 26 feet to 88 feet and the posted speed limit is 45 mph. There are bike lanes on both sides of the road along most of the segment. There is sidewalk only on the south side of Auto Mall Parkway, which runs half of the length of the segment. There is no on-street parking, a couple driveways, and low observed pedestrian and bicycle activity. There is a moderate amount of truck traffic on this segment. A traffic signal is located at the intersection of Boyce Road. This segment of Auto Mall Parkway carries approximately 4,870 vehicles per day in the study area. A speed survey was conducted on March 25, 2008 and the 85<sup>th</sup> percentile speed was measured at 43.0 mph.

Between Boyce Road and I-880, Auto Mall Parkway is primarily a six lane road with bike lanes separated by a raised median until just before the I-880 ramps where it turns into a seven lane roadway. The surrounding land uses include empty lots, commercial, and business properties. The road is approximately 108 feet wide and the posted speed limit is 40 mph. There is continuous sidewalk on both sides of the road, a few driveways, and no on-street parking. Traffic signals are located at the intersections of Boyce Road, Boscell Road, Pacific Commons Boulevard, Christy Street, and the southbound diagonal I-880 off-ramp. This segment of Auto Mall Parkway carries 17,765 vehicles per day in the study area. A speed survey was conducted on April 11, 2008 and the 85<sup>th</sup> percentile speed was measured at 37.5 mph.

Between I-880 and Fremont Boulevard, Auto Mall Parkway is approximately 176 foot wide and the posted speed limit is 45 mph. Auto Mall Parkway is striped for six lanes with bike lanes, separated by a raised median, until South Grimmer Boulevard, where it tapers down to a four lane road with a wide, grass median and bike lanes. The surrounding land uses are business and commercial properties, empty lots, and the rears of residential developments. There is sidewalk on both sides of the road primarily in front of developed properties and no on-street parking. Traffic signals are located at the intersections of the northbound diagonal I-880 off-ramp, South Grimmer Boulevard, Technology Drive, and Fremont Boulevard. This section of Auto Mall Parkway carries approximately 44,000 vehicles per day in the study area. A speed survey was conducted on March 25, 2008 and the 85<sup>th</sup> percentile speed was measured at 45.1 mph.

Between Fremont Boulevard and I-680, Auto Mall Parkway has four travel lanes with bike lanes and is separated by a raised median. The surrounding lane use within this segment is primarily commercial and business properties and the rear of a residential development near Fremont Boulevard. The road is approximately 83 feet wide and has a posted speed limit of 45 mph. There is no on-street parking, some sections of sidewalk, and a few driveways. Traffic signals are located at the intersections of Fremont Boulevard, Osgood Road, and the I-680 ramps. This segment of Auto Mall Parkway carries approximately 46,010 vehicles per day in the study area. A speed survey was conducted on March 25, 2008 and the 85<sup>th</sup> percentile speed was measured at 45.4 mph.

### **Comments and Recommendations**

The collision rates for all segments of Auto Mall Parkway were below the expected rate.

Between the Westerly End and Boyce Road, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit remain at 45 mph.

Between Boyce Road and I-880, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit. The 10 mph pace is from 29 mph to 38 mph. Based on the observed conditions and the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit remain at 40 mph.

Between I-880 and Fremont Boulevard, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit. The 10 mph pace is from 36 mph to 45 mph. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit remain at 45 mph.

Between Fremont Boulevard and I-680, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit. The 10 mph pace is from 35 mph to 44 mph. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit remain at 45 mph.



### Bayside Parkway between Warren Avenue and Bayview Drive

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Warren Avenue	Bayview Drive	35 mph	35 mph	37.9 mph	2	0.90

#### **Conditions**

Bayside Parkway is striped for two lanes with a two-way turn lane and is approximately 52 feet wide. The posted speed limit is 35 mph. The adjacent land use is primarily business with some open land. There are continuous sidewalks on both sides of the street and no parking is allowed on this segment. This section of Bayside Parkway is closed from 11 pm to 6 am. A four-way stop is located at West Warren Avenue and there is a stop sign on Bayside Parkway at Bayview Drive. The intersection of Gateway Boulevard and Bayside Parkway has a traffic signal. This segment has many driveways and a horizontal curve at the center. Bayside Parkway carries approximately 2,410 vehicles per day in the study area. A speed survey was conducted on March 27, 2008 and the 85<sup>th</sup> percentile speed was measured at 37.9 mph.

#### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 40 mph speed limit and the collision rate is below the expected rate for this road type. However, the 10 mph pace ranges from 28 mph to 37 mph and the suggested speed limit does not fall within that range, which justifies downgrading of the 85<sup>th</sup> percentile speed by 5 mph. Based on the 10 mph pace, it is recommended that the posted speed limit remain at 35 mph.



## Bayview Drive between Lakeview Boulevard and Fremont Boulevard

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Lakeview Boulevard	Fremont Boulevard	35 mph	35 mph	38.8 mph	0	0

### **Conditions**

Bayview Drive is striped for two lanes with a two-way turn lane and is approximately 50 feet wide. The posted speed limit is 35 mph. The land use is business frontage with a few driveways. There is no parking along the segment and no bike lanes. Bayview Drive has one stop sign at Fremont Boulevard and one at Lakeview Boulevard. Bayview Drive carries approximately 750 vehicles per day in the study area. A speed survey was conducted on March 26, 2008 and the 85<sup>th</sup> percentile speed was measured at 38.8 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed indicates a 40 mph speed limit and there were no collisions along this corridor during the study period. However, the 10 mph pace is from 26 mph to 35 mph and the suggested speed limit is much higher than the upper pace speed, which justifies downgrading of the 85<sup>th</sup> percentile speed by 5 mph. Therefore, it is recommended that the posted speed limit on Bayview Drive remain at 35 mph.



## Beacon Avenue between Fremont Boulevard and Liberty Street

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Fremont Boulevard	Liberty Street	30 mph	30 mph	34.6 mph	3	1.77

### **Conditions**

Beacon Avenue is a four lane undivided road, is approximately 44 feet wide, and has a posted speed limit of 30 mph. The land use on the east side of Beacon Avenue is primarily open land with some commercial development between Fremont Boulevard and California Street. The land use on the west side is commercial near Fremont Boulevard, residential until State Street, and business until Liberty Street. There is no on-street parking or bike lanes along this segment. There are a few driveways and continuous sidewalks on both sides of the street. There are three bulb-outs between State Street and Liberty Street. The intersection of Beacon Avenue and Fremont Boulevard has a traffic signal. Beacon Avenue carries approximately 4,800 vehicles per day in the study area. A speed survey was conducted on May 5, 2008 and the 85<sup>th</sup> percentile speed was measured at 34.6 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a speed limit of 35 mph and the collision rate is below the expected rate for this type of road. The 10 mph pace is from 26 mph to 35 mph and the suggested speed limit is on the upper end of the pace speed, which justifies downgrading of the 85<sup>th</sup> percentile speed by 5 mph. Therefore, it is recommended that the posted speed limit on Beacon Avenue remain at 30 mph.

### Blacow Road between Fremont Boulevard and Thornton Avenue

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Fremont Boulevard	Stevenson Boulevard	40 mph	40 mph	47.1 mph	24	0.90
Stevenson Boulevard	Central Avenue	40 mph	40 mph	44.6 mph	25	0.72
Central Avenue	Thornton Avenue	35/40 mph	35 mph	39.7 mph	8	1.02

#### **Conditions**

For the purpose of this study, Blacow Road was separated into three (3) segments:

- Fremont Boulevard to Stevenson Boulevard
- Stevenson Boulevard to Central Avenue
- Central Avenue to Thornton Avenue

Between Fremont Boulevard and Stevenson Boulevard, Blacow Road is approximately 70 feet wide and is four lane lanes with a raised median. The posted speed limit is 40 mph. There is on-street parking between Fremont Boulevard and Gatewood Street, a few driveways, and moderate pedestrian traffic observed. The land use is primarily non-fronting residential, with frontage roads on both sides. There are no sidewalks or bike lanes from Stevenson Boulevard to Robin Street, but are present from Robin Street to Fremont Boulevard. There are traffic signals at Stevenson Boulevard, Hilo Street, Robin Street, Grimmer Boulevard, Sherwood Street, and Fremont Boulevard. A school is located between Grimmer Boulevard and Sherwood Street. Almost directly across from the school, on the south side of Blacow, there is a community park, YMCA, and library. Between Grimmer Boulevard and Sherwood Street there are warning speed limits of 25 mph when children are present. This segment of Blacow Road carries approximately 15,940 vehicles per day in the study area. A speed survey was conducted on April 8, 2008 and the 85<sup>th</sup> percentile speed was measured at 47.1 mph.

Between Stevenson Boulevard and Central Avenue, Blacow Road is four lanes with a raised median and a short section between Mowry Avenue and Brophy Drive where it is six lanes. The road is approximately 67 feet wide with a posted speed limit of 40 mph. The surrounding land use is primarily non-fronting residential, with frontage roads on both sides of the road. A school is located south of Blacow Road near the intersection of Stevenson Boulevard. There are traffic signals at Central Avenue, Eggers Drive, Mowry Avenue, Calaveras Avenue, Coco Palm Drive, Boone Drive, and Stevenson Boulevard. There is no on-street parking, bike lanes, and intermittent sidewalk along this segment. This section of Blacow Road carries approximately 15,780 vehicles per day in the study area. A speed survey was conducted on April 9, 2008 and the 85<sup>th</sup> percentile speed was measured at 44.6 mph.



Between Central Avenue and Thornton Avenue, Blacow Road is divided, four lanes, and approximately 61 feet wide. The adjacent land is fronting residential between Thornton Avenue and Hansen Avenue, some non-fronting residential, and some commercial. There is a vertical curve as the railroad tracks cross the road near Hansen Avenue. There are sidewalks and parking on both sides of Blacow Road in this segment. There is a posted bike route, but no bike lanes. The posted speed limit is 35 mph between Thornton Avenue and Hansen Avenue and 40 mph between Hansen Avenue and Central Avenue. Traffic signals are located at Thornton Avenue and Central Avenue. This section carries approximately 14,080 vehicles per day. A speed survey was conducted on March 31, 2008 and the 85<sup>th</sup> percentile speed was measured at 39.7 mph.

### **Comments and Recommendations**

The collision rates for all segments of Blacow Road were below the expected rate.

Between Fremont Boulevard and Stevenson Boulevard, the 85<sup>th</sup> percentile speed suggests a speed limit of 45 mph. Due to the surrounding land uses, including residential neighborhoods, a school, a park, a YMCA, and a library, and high pedestrian activity, downgrading the speed limit by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain at 40 mph.

Between Stevenson Boulevard and Central Avenue, the 85<sup>th</sup> percentile speed suggests a speed limit of 45 mph. The 10 mph pace range is from 35 mph to 44 mph, so the suggested speed limit falls just outside that range. Based on the 10 mph pace and the residential neighborhoods surrounding the segment, downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain at 40 mph.

Between Central Avenue and Thornton Avenue, the 85<sup>th</sup> percentile speed suggests a speed limit of 40 mph. The 10 mph pace is from 30 mph to 39 mph, with the suggested speed limit above that range. Based on the 10 mph pace and the fronting residential along the segment, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 35 mph.

## Boscell Road between Stewart Avenue and Bunche Drive

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Stewart Avenue	Auto Mall Parkway	40 mph	35 mph	37.7 mph	1	0.32
Auto Mall Parkway	Bunche Drive	30/35 mph	35 mph	34.8 mph	1	0.81

### **Conditions**

For the purpose of this study, Boscell Road was separated into two (2) segments:

- Stewart Avenue to Auto Mall Parkway
- Auto Mall Parkway to Bunche Drive

Between Stewart Avenue and Auto Mall Parkway, Boscell Road is undivided, striped for two lanes, and is approximately 42 feet wide. The posted speed limit is 40 mph. Most of the segment has sidewalks, parking is intermittent, and there are a few driveways. Boscell Road has moderate truck volume. The land use is primarily business and industrial and there are some commercial properties on the northern side of Boscell Road next to Auto Mall Parkway. A stop sign is located on Boscell Road at Stewart Avenue and there is a traffic signal at Auto Mall Parkway. This portion of Boscell Road carries approximately 3,610 vehicles per day in the study area. A speed survey was conducted on March 28, 2008 and the 85<sup>th</sup> percentile speed was measured at 37.7 mph.

Between Auto Mall Parkway and Bunche Drive, Boscell Road is a four lane road with a raised median and has a width which varies from 72 to 92 feet. This section has a posted speed limit of 30 mph on the southbound side and 35 mph on the northbound side. The adjacent land is commercial development. There are sidewalks and bike lanes on both sides of the road. There is a traffic signal at the Costco driveway entrance and another one at Curie Street. A stop sign is located on Boscell Road at the intersection of Bunche Drive. This portion of Boscell Road carries approximately 2,470 vehicles per day in the study area. A speed survey was conducted on April 15, 2008 and the 85<sup>th</sup> percentile speed was measured at 35.4 mph.

### **Comments and Recommendations**

The collision rates for both segments of Blacow Road were below the expected rate.

Between Stewart Avenue and Auto Mall Parkway, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit. The 10 mph pace is from 28 mph to 37 mph, so the suggested speed limit falls outside this range. Based on the 10 mph pace and to be consistent with adjacent segment speed limit, it is recommended that the posted speed limit be 35 mph, lowered from 40 mph.



Between Auto Mall Parkway and Bunche Drive, the 85<sup>th</sup> percentile speed suggests a speed limit of 35 mph. Currently, the southbound direction has a speed limit of 30 mph and the northbound direction has a speed limit of 35 mph. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit be 35 mph, in both directions.



## Boyce Road between Stevenson Boulevard and Auto Mall Parkway

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Stevenson Boulevard	Auto Mall Parkway	45 mph	45 mph	47.8 mph	4	0.18

### **Conditions**

Boyce Road is a four lane divided road. The surrounding land uses are commercial frontage with some industrial sections. The road is approximately 76 feet wide and has a posted speed limit of 45 mph. There is no parking, some sections of sidewalk, and bike lanes on both side of the road. The truck traffic is moderate in this segment. A power station is located on the corner of Boyce Road and Auto Mall Parkway. There are signalized intersections at Auto Mall Parkway and Stevenson Boulevard. There is a street closed sign (11 pm to 6 am) near Auto Mall Parkway. Boyce Road carries approximately 17,960 vehicles per day. A speed survey was conducted on March 28, 2008 and the 85<sup>th</sup> percentile speed was measured at 47.8 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed indicates a 50 mph speed limit and the collision rate is below the expected rate for this type of roadway. However, the 10 mph pace is from 40 mph to 49 mph and the 50<sup>th</sup> percentile speed indicates 42.9 mph. Based on the 10 mph pace and the moderate truck traffic, the downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain at 45 mph.



## Business Center Drive between Grimmer Boulevard and Technology Drive

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Grimmer Boulevard	Technology Drive	40 mph	40 mph	39.6 mph	0	0

### **Conditions**

Business Center Drive is striped for two lanes with a two-way turn lane. The land use is commercial. The posted speed limit on Business Center Drive is 40 mph and the road is approximately 44 feet wide. There are many driveways, sidewalks on both sides, and no parking along the segment. Business Center Drive carries approximately 1,270 vehicles per day. A speed survey was conducted on April 11, 2008 and the 85<sup>th</sup> percentile speed was measured at 39.6 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a speed limit of 40 mph and there were no collisions during the study period. The 10 mph pace is from 31 mph to 40 mph. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit remain at 40 mph.



## Capitol Avenue between Paseo Padre Parkway and State Street

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Paseo Padre Parkway	State Street	30 mph	30 mph	35.3 mph	1	0.64

### **Conditions**

Capitol Avenue is an undivided road that is striped for four lanes between State Street and Liberty Street and five lanes between Liberty Street and Paseo Padre Parkway. The posted speed limit is 30 mph and the roadway width is 50 to 62 feet. The adjacent land use is primarily business with a fronting residential area on the western corner of Capitol Avenue and State Street. There is also a commercial area on the east side of Capitol Avenue between State Street and Liberty Street. There are two bulb-outs on the west side of Capitol Avenue, one has a bus stop and the other is a no stopping zone. There is a signal at Paseo Padre Parkway and a stop sign at State Street. There is no parking or bike lanes in this segment and sidewalks exist on both sides of the street. Capitol Avenue carries approximately 4,600 vehicles per day. A speed survey was conducted on May 5, 2008 and the 85<sup>th</sup> percentile speed was measured at 35.3 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a speed limit of 35 mph and the collision rate is below the expected rate for this type of roadway. However, the 10 mph pace is from 25 mph to 34 mph and the suggested speed does not fall within that range. Based on the 10 mph pace, the downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain at 30 mph.

## Central Avenue between Fremont Boulevard and Interstate 880

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Fremont Boulevard	Blacow Road	35 mph	35 mph	40.6 mph	17	1.27
Blacow Road	Interstate 880	35 mph	40 mph	43.5 mph	3	0.59

### **Conditions**

For the purpose of this study, Central Avenue was separated into two (2) segments:

- Fremont Boulevard to Blacow Road
- Blacow Road to Interstate 880

Between Fremont Boulevard and Blacow Road, Central Avenue is striped for four lanes with a two-way turn lane. The posted speed limit sign is 30 mph until Dusterberry Way, where it turns into a 35 mph zone. The road is approximately 85 feet wide. The adjacent land is primarily fronting and non-fronting residential, with some commercial. Central Avenue has on-street parking, bike lanes, and sidewalks on both sides. There are several uncontrolled pedestrian crossings on this segment and pedestrian activity is moderate. There is a church at the end of Central Avenue, on Fremont Boulevard. Central Avenue has traffic signals at Fremont Boulevard, Dusterberry Way, Logan Drive, Glenmoor Drive, and Blacow Road. This segment has a few residential driveways. This portion of Central Avenue carries approximately 12,160 vehicles per day. A speed survey was conducted on April 9, 2008 and the 85<sup>th</sup> percentile speed was measured at 40.6 mph.

Between Blacow Road and I-880, Central Avenue is striped for four lanes with a two-way turn lane. The posted speed limit is 35 mph and the road is approximately 82 feet wide. The surrounding land use is non-fronting residential, commercial. There is a cemetery near the Central Avenue/Centralsmont Place intersection. There are sidewalks on both sides of the road and on-street parking is allowed near Farwell Drive. A vertical curve leads up to the overcrossing above I-880. Central Avenue has signalized intersections at Farwell Drive and Blacow Road. This portion of Central Avenue carries approximately 11,610 vehicles per day. A speed survey was conducted on April 9, 2008 and the 85<sup>th</sup> percentile speed was measured at 43.5 mph.

### **Comments and Recommendations**

The collision rates for both segments of Central Avenue were below the expected rate.

Between Fremont Boulevard and Blacow Road, the 85<sup>th</sup> percentile speed suggests a speed limit of 40 mph. The 10 mph pace is from 31 mph to 40 mph and the suggested speed limit is at the top of that range. Due to the fronting residential in this segment, the uncontrolled crosswalks



along with moderate pedestrian activity, and the suggested speed being at the high end of the 10 mph pace, downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain at 35 mph.

Between Blacow Road and I-880, the 85<sup>th</sup> percentile speed suggests a speed limit of 45 mph. The 10 mph pace is from 36 mph to 45 mph and the suggested speed limit falls in that range. This segment is under ½ mile in length and therefore it is recommended that the speed limit be consistent with the segment to the north. Therefore, it is recommended that the posted speed limit be 40 mph.



## Christy Street between Stewart Avenue and Brandin Court

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Stewart Avenue	Auto Mall Parkway	45 mph	35 mph	37.7 mph	2	0.26
Auto Mall Parkway	Brandin Court	35 mph	35 mph	38.6 mph	0	0

### **Conditions**

For the purpose of this study, Christy Street was separated into two (2) segments:

- Stewart Avenue to Auto Mall Parkway
- Auto Mall Parkway to Brandin Court

Between Stewart Avenue and Auto Mall Parkway, Christy Street is striped for two lanes with a two-way turn lane from Auto Mall Parkway to Boscell Common, and then undivided until Stewart Avenue. The adjacent land use is primarily business with some commercial space near the Christy Street/Auto Mall Parkway intersection. The roadway width is approximately 44 feet and the posted speed limit is 45 mph. There are sidewalks and on-street parking intermittently on both sides of the street. There are two slight horizontal curves near Boscell Common. There is a signal at Auto Mall Parkway and a stop sign at Stewart Avenue and Albrae Street. This segment of Christy Street carries approximately 7,420 vehicles per day. A speed survey was conducted on April 11, 2008 and the 85<sup>th</sup> percentile speed was measured at 37.7 mph.

Between Auto Mall Parkway and Brandin Court, Christy Street is a divided six lane road from Auto Mall Parkway to Curie Street and two lane road from Curie Street to Brandin Court, with a two way left turn lane. The posted speed limit is 35 mph and the roadway width is approximately 70 feet. The land use is commercial in this segment. There is no parking along this segment and no bike lane from Auto Mall Parkway to Christy Street. There are continuous sidewalks on both sides of the street. There is a traffic signal at Auto Mall Parkway and Curie Street. This segment of Christy Street carries approximately 11,350 vehicles per day. A speed survey was conducted on April 11, 2008 and the 85<sup>th</sup> percentile speed was measured at 38.6 mph.

### **Comments and Recommendations**

The collision rates for both segments of Christy Street were below the expected rate for this type of road.

Between Stewart Avenue and Auto Mall Parkway, the 85<sup>th</sup> percentile speed suggests a speed limit of 40 mph. The 10 mph pace ranges from 29 mph to 38 mph and the suggested speed limit does not fall within that range. Based on the 10 mph pace, the downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be decreased to 35 mph.



Between Auto Mall Parkway and Brandin Court, the 85<sup>th</sup> percentile speed suggests a speed limit of 40 mph. The 10 mph pace ranges from 29 mph to 38 mph and the suggested speed limit does not fall within this range. Based on the 10 mph pace, the downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 35 mph.

## Civic Center Drive between Mowry Avenue and Stevenson Boulevard

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Mowry Avenue	Walnut Avenue	30 mph	30 mph	32.8 mph	5	1.30
Walnut Avenue	Stevenson Boulevard	35 mph	30 mph	33.0 mph	1	0.28

### **Conditions**

For the purpose of this study, Civic Center Drive was separated into two (2) segments:

- Mowry Avenue to Walnut Avenue
- Walnut Avenue to Stevenson Boulevard

Between Mowry Avenue and Walnut Avenue, Civic Center Drive is four lanes, divided, and has a roadway width of approximately 77 feet. The land use is primarily business with a hospital. The posted speed limit is 30 mph. There are continuous sidewalks on both sides of the street. There is high pedestrian activity along this segment due to businesses, hospital, and proximity to Fremont BART station. Traffic signals are located at Mowry Avenue, Bart Way, and Walnut Avenue and there is a flashing crosswalk 500 ft south from Mowry Avenue. This segment of Civic Center Drive carries approximately 9,880 vehicles per day. A speed survey was conducted on May 13, 2008 and the 85<sup>th</sup> percentile speed was measured at 32.8 mph.

Between Walnut Avenue and Stevenson Boulevard, Civic Center Drive is four lanes, divided, and has a roadway width of approximately 72 feet. The adjacent land has a hospital on the west side of Civic Center Drive and a mixed-use building (commercial on the first floor and residential above) on the east side. Fremont Central Park is next to the Civic Center Drive/Stevenson Boulevard intersection. There is high pedestrian activity along this segment due to nearby businesses, parks, and Fremont BART station. The posted speed limit is 35 mph. There are continuous sidewalks on both sides of the street. There is on-street parking along most of the segment, either parallel or angled parking spots, except for the area near Walnut Avenue. Traffic signals are located at Walnut Avenue and Stevenson Boulevard. This segment of Civic Center Drive carries approximately 11,460 vehicles per day. A speed survey was conducted on May 13, 2008 and the 85<sup>th</sup> percentile speed was measured at 33.0 mph.

### **Comments and Recommendations**

The collision rates for both segments of Civic Center Drive were below the expected rate for this type of roadway.

Between Mowry Avenue and Walnut Avenue, the 85<sup>th</sup> percentile speed suggests a speed limit of 35 mph. The 10 mph pace is from 25 mph to 34 mph and the suggested speed limit does not fall



within that range. Due to the 10 mph pace, downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain at 30 mph.

Between Walnut Avenue and Stevenson Boulevard, the 85<sup>th</sup> percentile speed suggests a speed limit of 35 mph. The 10 mph pace is from 26 mph to 35 mph and the suggested speed limit is at the top end of that range. Based on the 10 mph pace, high pedestrian activity, and to be consistent with the adjacent segment, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be decreased to 30 mph.



## Commerce Drive between Ardenwood Boulevard and Paseo Padre Parkway

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Ardenwood Boulevard	Paseo Padre Parkway	35 mph	35 mph	39.4 mph	0	0

### **Conditions**

Commerce Drive is an undivided, two lane road that is approximately 44 feet wide. The posted speed limit is 35 mph. The surrounding lane use is commercial. The south side of Commerce Drive has continuous sidewalk. Karl Nordvik Park is located near the Commerce Drive/Ardenwood Boulevard Intersection. There is a stop sign on Commerce Drive at Paseo Padre Parkway and a traffic signal at Ardenwood Boulevard. Commerce Drive carries approximately 335 vehicles per day in the study area. A speed survey was conducted on April 7, 2008 and the 85<sup>th</sup> percentile speed was measured at 39.4 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a speed limit of 40 mph and there were no collisions on this segment within the study period. However, the 10 mph pace is from 28 mph to 37 mph and the suggested speed limit does not fall in this range. Due to the 10 mph pace, downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain at 35 mph.



## Country Drive between Fremont Boulevard and Paseo Padre Parkway

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Fremont Boulevard	Paseo Padre Parkway	35 mph	30 mph	31.4 mph	1	0.45

### **Conditions**

Country Drive is an undivided, four lane road with a posted speed limit of 35 mph. The road is 66 feet wide. Between Fremont Boulevard and Hastings Street there are 25 mph warning speed limit signs for when children are present. The adjacent land is primarily apartments and fronting residential on the east side of Country Drive and a school and community park that take up most of the area on the west side. There is some on-street parking and continuous sidewalks on both sides of the street. Country Drive has signalized intersections at Fremont Boulevard and Paseo Padre Parkway. There is a three-way stop at Lexington Street and a four-way stop at Hastings Street. Country Drive carries approximately 4,060 vehicles per day in the study area. A speed survey was conducted on April 17, 2008 and the 85<sup>th</sup> percentile speed was measured at 31.4 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a speed limit of 30 mph and the collision rate is below the expected rate for this type of roadway. The 10 mph pace is from 22 mph to 31 mph. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit be decreased to 30 mph.



## Curie Street between Christy Street and Boscell Road

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Christy Street	Boscell Road	30 mph	30 mph	33.7 mph	0	0

### **Conditions**

Curie Street is a two lane road with a two-way turn lane. The posted speed limit is 30 mph and the road is 46 to 54 feet wide. The land use on the northern end is commercial while the land use on the southern side is open space. There is a bike lane and continuous sidewalk on both sides of the street. There is no parking except for the south side between Pacific Commons Boulevard and Christy Street. There is a three-way stop at Pacific Commons Boulevard and traffic signals at Boscell Road and Christy Street. Curie Street carries approximately 1,980 vehicles per day. A speed survey was conducted on April 11, 2008 and the 85<sup>th</sup> percentile speed was measured at 33.7 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 35 mph speed limit and there were no collisions along this segment during the study period. The 10 mph pace is from 25 mph to 34 mph and the suggested speed limit does not fall in that range, therefore justifying a downgrading of the 85<sup>th</sup> percentile speed by 5 mph. Based on the 10 mph pace, it is recommended that the posted speed limit remain at 30 mph.

## Cushing Parkway between Auto Mall Parkway and Fremont Boulevard

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Auto Mall Parkway	Bunche Drive	40 mph	40 mph	44.2 mph	1	0.07
Bunche Drive	South End of Causeway	40 mph	45 mph	48.1 mph	4	0.21
South End of Causeway	Fremont Boulevard	45 mph	45 mph	45.0 mph	1	0.03

### **Conditions**

For the purpose of this study, Cushing Parkway was separated into three (3) segments:

- Auto Mall Parkway to Bunche Drive
- Bunche Drive to the south end of the causeway
- South end of the causeway to Fremont Boulevard

Between Auto Mall Parkway and Bunche Drive, Cushing Parkway fronts commercial property with a posted speed limit of 40 mph. The average daily traffic is 25,470 vehicles per day and this straight and flat 77 foot wide roadway is striped for two travel lanes in each direction with bike lanes on each side of the roadway. A speed survey was conducted on April 11, 2008 and the 85<sup>th</sup> percentile speed was measured at 44.2 mph.

Between Bunche Drive and the south end of the causeway, Cushing Parkway fronts undeveloped property and wetlands preserve with a posted speed limit of 40 mph. A causeway is located along this segment and the average daily traffic is 10,680 vehicles per day and the 87 foot wide roadway is striped for two travel lanes in each direction, with bike lanes on each side, separated by a raised median. When Cushing Parkway crosses over the wetlands via the causeway, two lanes and a bike lane in each direction are present. A speed survey was conducted on April 11, 2008 and the 85<sup>th</sup> percentile speed was measured at 48.1 mph.

Between the south end of the causeway and Fremont Boulevard, Cushing Parkway provides access to nearby office buildings as well as access to Interstate 880. The current speed limit is posted at 45 mph and the average daily traffic is 12,100 vehicles per day. This 97 foot wide roadway has three travel lanes in each direction and bike lanes on each side separated by a 25 foot wide raised median. This section of Cushing Parkway carries approximately 17,965 vehicles per day in the study area. A speed survey was conducted on April 11, 2008 and the 85<sup>th</sup> percentile speed was measured at 45.0 mph.

### **Comments and Recommendations**

The collision rates for all segments of Cushing Parkway were below the expected rate for a 4-lane road.





For the segment between Auto Mall Parkway and Bunche Drive the 85<sup>th</sup> percentile speed indicated a 45 mph speed limit. The 10 mph pace, however, is from 34 mph to 43 mph and the speed limit should fall in the middle of this range. Due to the location of the nearby auto dealerships and Pacific Commons shopping center there is a high level of pedestrian activity. Due to the pedestrian activity and to have a speed limit at the middle of the 10 mph pace, a speed limit of 40 mph is recommended.

Between Bunche Drive and the south end of the causeway the 85<sup>th</sup> percentile speed indicates a 50 mph speed limit. The 10 mph pace is from 38 mph to 47 mph. This section of Cushing Parkway includes setting the speed limit for the causeway over the wetlands preserve in which the design speed was 47 mph. CVC 22404 requires that a public hearing be held prior to making a determination of the maximum safe speed upon an elevated structure. Based on the 10 mph pace, the downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit on this segment of Cushing Parkway be increased to 45 mph.

For the section between the south end of the causeway and Fremont Boulevard the 85<sup>th</sup> percentile speed indicates a 45 mph speed limit. The 10 mph pace is from 37 mph to 46 mph and the suggested speed limit falls within that range. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit remain at 45 mph.



## Decoto Road between City Limits and Interstate 880

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
City Limits	Fremont Boulevard	40 mph	40 mph	43.7 mph	17	0.77
Fremont Boulevard	Interstate 880	40 mph	40 mph	41.5 mph	11	0.46

### **Conditions**

For the purpose of this study, Decoto Road was separated into two (2) segments:

- City Limits to Fremont Boulevard
- Fremont Boulevard to Interstate 880

Between the City Limits and Fremont Boulevard, Decoto Road is a divided, six lane road until Paseo Padre Parkway where it turns into a divided four-lane road until the city limits. The road is approximately 100 feet wide with a posted speed limit of 40 mph. There is no on-street parking and there are bike lanes and continuous sidewalks on both sides of the road. Although this road is designated as a truck route, the observed truck traffic was low. The land use is primarily non-fronting residential and commercial. Close to the city limits there is a bridge over Alameda Creek. A church is located on the west side of Decoto Road, about halfway through the segment. The intersections at Fremont Boulevard and Paseo Padre Parkway are both signalized. This segment of Decoto Road carries approximately 29,360 vehicles per day. A speed survey was conducted on April 10, 2008 and the 85<sup>th</sup> percentile speed was measured at 43.7 mph.

Between Fremont Boulevard and I-880, Decoto Road is a divided, five lane road, with three lanes southbound, from Fremont Boulevard to Cabrillo Drive, then it turns into an undivided, four lane road. The road is approximately 95 feet wide and has a posted speed limit of 40 mph. The adjacent land is primarily non-fronting residential neighborhoods with some commercial properties and open space. There are bike lanes on both sides of the road. Traffic signals are located at Fremont Boulevard, Ozark River Way and Cabrillo Drive. This segment of Decoto Road carries approximately 36,030 vehicles per day. A speed survey was conducted on April 11, 2008 and the 85<sup>th</sup> percentile speed was measured at 41.5 mph.

### **Comments and Recommendations**

The collision rates for both segments of Decoto Road were below the expected rate for this type of roadway.

Between the City Limits and Fremont Boulevard, the 85<sup>th</sup> percentile speed suggests a speed limit of 45 mph. The 10 mph pace is from 34 mph to 43 mph and the suggested speed limit is above



that range. Due to the 10 mph pace, downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain at 40 mph.

Between Fremont Boulevard and I-880, the 85<sup>th</sup> percentile speed indicates a speed limit of 40 mph. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit remain at 40 mph.

## Deep Creek Road between Ridgewood Drive and Alvarado Boulevard

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Ridgewood Drive	Paseo Padre Parkway	30 mph	30 mph	34.0 mph	4	2.02
Paseo Padre Parkway	Alvarado Boulevard	30 mph	35 mph	41.9 mph	3	0.39

### **Conditions**

For the purpose of this study, Deep Creek Road was separated into two (2) segments:

- Ridgewood Drive to Paseo Padre Parkway
- Paseo Padre Parkway to Alvarado Boulevard

Between Ridgewood Road and Paseo Padre Parkway, Deep Creek Road is a two lane road separated by a two-way turn lane. The road is approximately 64 feet wide and has a posted speed limit of 30 mph. The surrounding land use is apartments, non-fronting residential neighborhoods, and some commercial near Paseo Padre Parkway. Parking is allowed on both sides of the street between Maybird Circle and Ridgewood Drive and no-parking is allowed between Paseo Padre Parkway and Maybird Circle. Deep Creek Road has sidewalks on both sides of the street and there are couple slight horizontal curves. The pedestrian activity is moderate due to a school and Frank Fisher Park, located on Deep Creek Road at Maybird Circle. There is a traffic signal at Paseo Padre Parkway and a stop sign on Deep Creek Road at Ridgewood Drive. Deep Creek Road carries approximately 3,410 vehicles per day. A speed survey was conducted on April 10, 2008 and the 85<sup>th</sup> percentile speed was measured at 34.0 mph.

Between Alvarado Boulevard and Paseo Padre Parkway, Deep Creek Road is a two lane road with a two-way turn lane. The road is approximately 62 feet wide and has a posted speed limit of 30 mph. The surrounding land use includes fronting residential, non-fronting residential neighborhoods, a park, and a nearby school. Parking is allowed on both sides of the street. There is a horizontal curve in the roadway near the park. Deep Creek Road has sidewalks on both sides of the street, a few driveways and a bike lane on both sides of the road. The pedestrian activity is high and the bicycle activity is moderate due to a nearby school and Deep Creek Park. There are traffic signals at Alvarado Boulevard and Paseo Padre Parkway. Deep Creek Road carries approximately 7,470 vehicles per day. A speed survey was conducted on April 10, 2008 and the 85<sup>th</sup> percentile speed was measured at 41.9 mph.

### **Comments and Recommendations**

Between Ridgewood Drive and Paseo Padre Parkway, the 85<sup>th</sup> percentile speed suggests a 35 mph speed limit and the collision rate is higher than the expected rate for this type of roadway. The 10 mph pace is from 23 mph to 32 mph and the suggested speed limit does not fall within that range. Due to the high collision rate, pedestrian activity, and the 10 mph pace, a



downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain at 30 mph.

Between Alvarado Boulevard and Paseo Padre Parkway, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit and the collision rate is below the expected rate for this type of roadway. However, the 10 mph pace is from 31 mph to 40 mph and the suggested speed limit falls at the top of that range. Due to the high pedestrian activity, moderate bicycle activity, residential density and location of a nearby school, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 35 mph, increased from 30 mph.

## Driscoll Road between Mission Boulevard and Washington Boulevard

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Mission Boulevard	Paseo Padre Parkway	40 mph	40 mph	41.8 mph	3	0.31
Paseo Padre Parkway	Washington Boulevard	40 mph	40 mph	43.1 mph	5	0.65

### **Conditions**

For the purpose of this study, Driscoll Road was separated into two (2) segments:

- Mission Boulevard to Paseo Padre Parkway
- Paseo Padre Parkway to Washington Boulevard

Between Mission Boulevard and Paseo Padre Parkway, Driscoll Road is a four lane divided road. The surrounding land uses include non-fronting residential neighborhoods, two churches, two schools, and a commercial area near Paseo Padre Parkway. The road is approximately 66 feet wide, and the posted speed limit is 40 mph. Some parking is permitted by Hopkins Junior High School. There are bike lanes and continuous sidewalk on both sides of the street. There are traffic signals located at Paseo Padre Parkway, Amapola Drive, and Mission Boulevard. This segment of Driscoll Road carries approximately 12,090 vehicles per day in the study area. A speed survey was conducted on May 15, 2008 and the 85<sup>th</sup> percentile speed was measured at 41.8 mph.

Between Paseo Padre Parkway and Washington Boulevard, Driscoll Road is striped for four lanes and divided for the majority of the segment, except for one small section between Beatrice Street and Timber Creek Terrace where there is a two-way left turn lane. The posted speed limit is 40 mph and the roadway is approximately 66 feet wide. The adjacent land use is primarily non-fronting residential neighborhoods except for a church near Beatrice Street, a commercial area near the Paseo Padre Parkway intersection, and a small amount of fronting residential near Washington Boulevard. There is no on-street parking along this segment except for a couple of blocks near Paseo Padre Parkway. There are bike lanes and continuous sidewalks along both sides of the street. There are traffic signals at Paseo Padre Parkway and Washington Boulevard. Driscoll Road carries approximately 10,910 vehicles per day. A speed survey was conducted on May 15, 2008 and the 85<sup>th</sup> percentile speed was measured at 43.1 mph.

### **Comments and Recommendations**

The collision rates for both segments of Driscoll Road were below the expected rate for this type of road.



Between Mission Boulevard and Paseo Padre Parkway, the 85<sup>th</sup> percentile speed suggests a speed limit of 40 mph. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit remains at 40 mph.

Between Paseo Padre Parkway and Washington Boulevard, the 85<sup>th</sup> percentile speed suggests a speed limit of 45 mph. The 10 mph pace is from 35 mph to 44 mph and the suggested speed limit does not fall within that range. Due to the fronting residential near Washington Boulevard, the 10 mph pace, and to be consistent with the adjacent segment to the north, it is recommended that the speed limit remain at 40 mph.



## Dumbarton Circle between Paseo Padre Parkway and Kaiser Drive

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Paseo Padre Parkway	Kaiser Drive	35 mph	40 mph	44.6 mph	0	0

### **Conditions**

Dumbarton Circle is mainly a two lane road with a two-way turn lane which turns into a divided, four lane road approximately 1000 feet from Paseo Padre Parkway. The road is approximately 52 feet wide. There were no speed limit signs located on this segment. There is a horizontal curve located near Ardentech Court and warning speed limit signs of 30 mph on the curve. The street is closed from 11 pm to 6 am every day. A stop sign is located at both Paseo Padre Parkway and Kaiser Drive. The adjacent land is business and offices. There is no bike lane or on-street parking along this segment. There is continuous sidewalk along Dumbarton Circle except for the area near Kaiser Drive. Dumbarton Circle carries approximately 1,385 vehicles per day and the existing speed limit is 35 mph. A speed survey was conducted on April 11, 2008 and the 85<sup>th</sup> percentile speed was measured at 44.6 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a speed limit of 45 mph and there are no collisions on this segment. However, the 10 mph pace is from 26 mph to 35 mph and the suggested speed limit is much higher than the upper range of the pace. Due to the 10 mph pace, the downgrading of the 85<sup>th</sup> percentile speed is justified. Therefore, it is recommended that the speed limit be posted at 40 mph.





## Durham Road between Interstate 680 and Mission Boulevard

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Interstate 680	Mission Boulevard	40 mph	40 mph	40.7 mph	5	0.40

### **Conditions**

Durham Road is striped for four lanes with a bike lane until Sioux Drive where it tapers down to three lanes and then again to two lanes near Kadi Court. The posted speed limit is 40 mph and the roadway is approximately 64 feet wide. There is continuous sidewalk on both sides of the roadway. The surrounding land use is non-fronting residential neighborhoods. There are several horizontal curves in the road in this section. There are traffic signals located at the intersections of the northbound I-680 ramps, Paseo Padre Parkway, and Mission Boulevard. Durham Road carries approximately 9,760 vehicles per day. A speed survey was conducted on April 11, 2008 and the 85<sup>th</sup> percentile speed was measured at 40.7 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a speed limit of 40 mph and the collision rate is below the expected rate for this type of roadway. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit remains at 40 mph.



## Dusterberry Way between Central Avenue and Thornton Avenue

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Central Avenue	Thornton Avenue	30 mph	35 mph	36.7 mph	7	1.41

### **Conditions**

Dusterberry Way is an undivided four lane road. The posted speed limit is 30 mph and the road width is approximately 64 feet. The adjacent land use is a mix of non-fronting residential and commercial. This segment has a non-striped bike route, continuous sidewalks, and on-street parking. There are several horizontal curves and a small vertical curve as the road crosses over the railroad tracks. There are signalized intersections at Central Avenue, Peralta Boulevard, and Thornton Avenue. Dusterberry Way carries approximately 8,790 vehicles per day. A speed survey was conducted on April 11, 2008 and the 85<sup>th</sup> percentile speed was measured at 36.7 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a speed limit of 35 mph and the collision rate is below the expected rate for this type of roadway. The 10 mph pace is from 28 mph to 37 mph. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit be increased to 35 mph.

## Fremont Boulevard between Beard Road and Lakeview Boulevard

<i><b>Segment From:</b></i>	<i><b>To:</b></i>	<i><b>Posted Limits:</b></i>	<i><b>Proposed Limits:</b></i>	<i><b>85<sup>th</sup> Percentile Speeds:</b></i>	<i><b>Num. of Collisions</b></i>	<i><b>Collision Rate (ACC/MVM):</b></i>
Beard Road	Decoto Road	40 mph	40 mph	36.2 mph	22	1.04
Decoto Road	Thornton Avenue	40 mph	40 mph	41.8 mph	31	0.85
Peralta Boulevard	Central Avenue	30 mph	30 mph	34.2 mph	12	2.19
Central Avenue	Mowry Avenue	35 mph	35 mph	40.3 mph	40	1.34
Mowry Avenue	Stevenson Boulevard	35/40 mph	40 mph	45.7 mph	26	0.79
Stevenson Boulevard	Washington Boulevard	35 mph	35 mph	41.5 mph	62	1.82
Washington Boulevard	Auto Mall Parkway	35 mph	40 mph	41.0 mph	18	0.57
Auto Mall Parkway	Interstate 880	45 mph	45 mph	47.4 mph	8	0.36
Interstate 880	Warren Avenue	35/40 mph	45 mph	43.7 mph	4	0.27
Warren Avenue	Lakeview Boulevard	40 mph	45 mph	47.6 mph	2	0.21

### **Conditions**

For the purpose of this study, Fremont Boulevard was separated into ten (10) segments:

- Beard Road to Decoto Road
- Decoto Road to Thornton Avenue
- Peralta Boulevard to Central Avenue
- Central Avenue to Mowry Avenue
- Mowry Avenue to Stevenson Avenue
- Stevenson Avenue to Washington Boulevard
- Washington Avenue to Auto Mall Parkway
- Auto Mall Parkway to Interstate 880
- Interstate 880 to Warren Avenue
- Warren Avenue to Lakeview Boulevard

Between Beard Road and Decoto Road, Fremont Boulevard is a divided road which varies from five to six lanes. The road width ranges from approximately 86 feet to 102 feet and the segment has a posted speed limit of 40 mph. The surrounding land uses include commercial, apartments, and non-fronting residential. There are bike lanes and sidewalk along both sides of the roadway. There are traffic signals at Decoto Road, Ferry Lane, Darwin Drive, Paseo Padre Parkway, and Enea Court. Although this section of Fremont Boulevard is a designated truck route there was low observed truck traffic. This portion of Fremont Boulevard carries approximately 22,240 vehicles per day. A speed survey was conducted on March 21, 2008 and the 85<sup>th</sup> percentile speed was measured at 36.2 mph.

Between Decoto Road and Thornton Avenue, Fremont Boulevard is a four to five lane divided road. This segment is a four lane road with a raised median until Tamayo Street, where it changes to five lanes with a raised median. The road comes back down to four lanes with a raised median just south of Alder Avenue to Thornton Avenue. The surrounding land use includes a school, a park, a retirement community, non-fronting residential neighborhoods, and office and commercial properties. The roadway is approximately 90 to 98 feet wide and the posted speed limit of 40 mph. There are no improvements on the north side of Fremont Boulevard from a few hundred feet south of Decoto Road to Tamayo Street, but the rest of the segment has continuous sidewalk, a bike lane, and some sections of on-street parking near the school. Pedestrian activity is moderate along this section. Traffic signals are located at the intersections of Decoto Road, Tamayo Street, Nicolet Avenue, Gibraltar Drive, Alder Avenue, and Thornton Avenue. This portion of Fremont Boulevard carries approximately 24,870 vehicles per day. A speed survey was conducted on March 21, 2008 and the 85<sup>th</sup> percentile speed was measured at 41.8 mph.

Between Peralta Boulevard and Central Avenue, Fremont Boulevard is a four lane undivided road, and approximately 60 feet wide. There is some parking allowed near Parish Avenue on the west side of the road. There are continuous sidewalks on both sides of the street. The posted speed limit is 30 mph and the land use is commercial. Both the intersection at Peralta Boulevard and the one at Central Avenue are signalized. This portion of Fremont Boulevard carries approximately 24,880 vehicles per day. A speed survey was conducted on March 25, 2008 and the 85<sup>th</sup> percentile speed was measured at 34.2 mph.

Between Central Avenue and Mowry Avenue, Fremont Boulevard is a divided, four lane road until Monroe Avenue, where it turns into five lanes. This segment has a posted speed limit of 35 mph and the road is 80 to 94 feet wide. The surrounding land use is mostly residential, including fronting residential, with some commercial properties. A bike route runs along most of this segment until it turns into a bike lane from Eggers Drive to Mowry Avenue. There are two schools located on the north side of Fremont Boulevard, one near Central Avenue and one between Eggers Drive and Country Drive. Also, there is a church across from the school between Eggers Drive and Country Drive. This segment has on-street parking, sidewalks, and a few residential driveways. The pedestrian activity is moderate to high, especially during school times. Traffic signals are located at Central Avenue, Eggers Drive, Country Drive, and Mowry Avenue. This portion of Fremont Boulevard carries approximately 27,100 vehicles per day. A speed survey was conducted on March 27, 2008 and the 85<sup>th</sup> percentile speed was measured at 40.3 mph.

Between Mowry Avenue and Stevenson Boulevard, Fremont Boulevard is striped for six lanes with a raised median. Fremont Boulevard has a posted speed limit of 35 mph except in between Sundale Drive and Stevenson Boulevard, where the speed limit changes to 40 mph. The road is 92 to 104 feet wide. The land use is primarily commercial with some apartment complexes. Williams Historical Park is located in between Mowry Avenue and Beacon Avenue, south of Fremont Boulevard. This segment has a bike route, sidewalk in some places, a few driveways and moderate to high pedestrian and bicycle traffic. There is no on-street parking permitted in this section. The following streets are signalized in this section: Mowry Avenue, Fremont Hub, Beacon Avenue, Walnut Avenue, Sundale Drive, Bidwell Drive, and Stevenson Boulevard. This portion of Fremont Boulevard carries approximately 29,880 vehicles per day. A speed survey was conducted on March 13, 2008 and the 85<sup>th</sup> percentile speed was measured at 45.7 mph.

Between Stevenson Boulevard and Washington Boulevard, Fremont Boulevard is a five lane, divided road near Stevenson Boulevard then it turns into four lanes until Clough Avenue. After Clough Avenue it stays four lanes, but the raised median is replaced with a two-way turn lane. The posted speed limit is 35 mph and the road is approximately 74 to 92 feet wide. The surrounding land is primarily residential, with some fronting residential and apartments, west of Eugene Street and primarily commercial east of Eugene Street. There is intermittent sidewalk and no on-street parking. Pedestrian activity is moderate in this section. Traffic signals are located at Stevenson Boulevard, Mission View Drive, Eugene Street, Grimmer Boulevard, Chapel Way, and Washington Boulevard. This portion of Fremont Boulevard carries approximately 33,390 vehicles per day. A speed survey was conducted on March 13, 2008 and the 85<sup>th</sup> percentile speed was measured at 41.5 mph.

Between Washington Boulevard and Auto Mall Parkway, Fremont Boulevard is mostly a four lane road with a raised median except in between Blacow Road and Doane Street where there is a two-way left turn lane. The posted speed limit is 35 mph and the road is 60 to 87 feet wide. The surrounding land use is commercial with some fronting and non-fronting residential areas. Also, there is a church located near Adams Avenue on the east side of Fremont Boulevard. The intersections at Washington Boulevard, Irvington Avenue, Carol Avenue, Blacow Road, Delaware Drive, and Auto Mall Parkway are all signalized. There are some striped bike lanes and bike route in the section, with some on-street parking and some segments of sidewalk. This portion of Fremont Boulevard carries approximately 18,860 vehicles per day in the study area. A speed survey was conducted on March 13, 2008 and the 85<sup>th</sup> percentile speed was measured at 41.0 mph.

Between Auto Mall Parkway and I-880, Fremont Boulevard is striped for four lanes with a raised median. The posted speed limit is 45 mph and the road is approximately 66 feet wide. The surrounding land uses include open space with commercial all along the segment. There are bike lanes from Auto Mall Parkway to Industrial Drive. There is no on-street parking, some patches of sidewalk, and a few driveways to the commercial properties. There are traffic signals at Auto Mall Parkway, Ice House Terrace, South Grimmer Boulevard, and Industrial Drive. This portion of Fremont Boulevard carries approximately 14,810 vehicles per day. A speed survey was conducted on March 13, 2008 and the 85<sup>th</sup> percentile speed was measured at 47.4 mph.

Between I-880 and Warren Avenue, Fremont Boulevard is a six lane road with a raised median from I-880 to Landing Parkway and has a speed limit of 35 mph. After Landing Parkway, Fremont Boulevard turns into an undivided, three lane road with a posted speed limit of 40 mph. The road is approximately 62 feet wide. The land use is commercial near I-880 and then commercial mixed with open space. There are several hotels near Landing Parkway. This section has minimal on-street parking and sidewalk, and no bike lanes. Most of the pavement along this segment is poor and a majority of the properties are undeveloped on the west side of the roadway. The intersections at Cushing Parkway and West Warren Avenue are signalized. This portion of Fremont Boulevard carries approximately 16,525 vehicles per day. A speed survey was conducted on March 13, 2008 and the 85<sup>th</sup> percentile speed was measured at 43.7 mph.

Between Warren Avenue and Lakeview Boulevard, Fremont Boulevard is four lanes with a two-way left turn lane. The posted speed limit on this segment is 40 mph and the road is approximately 64 feet wide. The surrounding land is primarily office. There is no on-street parking or bike lanes. There is sidewalk on both sides of the street in this section. There are two traffic signals along this segment, located at Warren Avenue and Gateway Boulevard. This portion of Fremont Boulevard carries approximately 6,090 vehicles per day in the study area. A speed survey was conducted on March 13, 2008 and the 85<sup>th</sup> percentile speed was measured at 47.6 mph.

### **Comments and Recommendations**

The collision rates for all segments of Fremont Boulevard were below the expected rate for this type of roadway.

Between Beard Road and Decoto Road, the 85<sup>th</sup> percentile speed suggests a speed limit of 35 mph. The 10 mph pace is from 28 mph to 37 mph. To be consistent with the adjacent segment between Decoto Road and Thornton Avenue and to avoid multiple speed limit changes, it is recommended that the speed limit remain 40 mph.

Between Decoto Road and Thornton Avenue, the 85<sup>th</sup> percentile speed suggests a speed limit of 40 mph. The 10 mph pace is from 34 mph to 43 mph. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit remain at 40 mph.

Between Peralta Boulevard and Central Avenue, the 85<sup>th</sup> percentile speed suggests a speed limit of 35 mph. The 10 mph pace ranges from 26 mph to 35 mph and the suggested limit is at the top of that range. However, to be consistent with the adjacent Thornton Avenue to Peralta Boulevard (SR-84) segment, it is recommended that the posted speed limit remain at 30 mph.

Between Central Avenue and Mowry Avenue, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit. The 10 mph pace ranges from 32 mph to 41 mph. However, moderate to high pedestrian activity is generated by residences, commercial properties, and schools in the area, justifying downgrading of the 85<sup>th</sup> percentile speed by 5 mph. Therefore, it is recommended that the posted speed limit remain 35 mph.

Between Mowry Avenue and Stevenson Boulevard, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit. The 10 mph pace ranges from 37 mph to 46 mph. The adjacent street sections have suggested speed limits of 35 mph, and speed zoning increments are preferably 5 mph in urban areas. In addition, the moderate to high pedestrian traffic justifies downgrading of the 85<sup>th</sup> percentile speed by 5 mph. Therefore, it is recommended that the posted speed limit be 40 mph.

Between Stevenson Boulevard and Washington Boulevard, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit. The 10 mph pace ranges from 34 mph to 43 mph. However, pedestrian activity in this section is moderate, there is surrounding residential land uses, and uncontrolled pedestrian crosswalks along the segment, justifying downgrading of the 85<sup>th</sup> percentile speed by 5 mph. Therefore, it is recommended that the posted speed limit remain 35 mph.

Between Washington Boulevard and Auto Mall Parkway, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit. The 10 mph pace ranges from 33 mph to 42 mph. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed be 40 mph, increased from 35 mph.

Between Auto Mall Parkway and Interstate 880, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit. The 10 mph pace is from 38 mph to 47 mph and the suggested speed limit falls within this range. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit remain at 45 mph.

Between Interstate 880 and Warren Avenue, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit and the collision rate is below the expected rate for this road type. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit be increased to 45 mph.

Between Warren Avenue and Lakeview Boulevard, the 85<sup>th</sup> percentile speed suggests a 50 mph speed limit. However, the 10 mph pace is from 36 mph to 45 mph and the suggested speed limit does not fall within this range, justifying downgrading of the 85<sup>th</sup> percentile speed by 5 mph. Therefore, it is recommended that the posted speed limit be 45 mph, increased from 40 mph.



## Gallaudet Drive between Walnut Avenue and Stevenson Boulevard

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Walnut Avenue	Stevenson Boulevard	30 mph	35 mph	40.1 mph	0	0

### **Conditions**

Between Walnut Avenue and Stevenson Boulevard, Gallaudet Drive is striped for two lanes with a two-way turn lane. The street is approximately 48 feet wide. The posted speed limit is 30 mph. There is California School for the Deaf and the Blind on the east side of Gallaudet Drive and the west side is mostly commercial, with some fronting and non-fronting residential and a church on the corner of Walnut Avenue. Fremont Central Park is located right at the south end of Gallaudet Drive. There is continuous sidewalk, no on-street parking, and two horizontal curves near Stevenson Boulevard. There are two intersections that are signalized, Walnut Avenue and Stevenson Boulevard. Gallaudet Drive carries approximately 4,175 vehicles per day in the study area. A speed survey was conducted on March 27, 2008 and the 85<sup>th</sup> percentile speed was measured at 40.1 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 40 mph speed limit and the collision rate is below the expected rate for this road type. However, the 10 mph pace is from 30 mph to 39 mph and the suggested speed limit is just above this range. Based on the 10 mph pace and location of the nearby California School for the Deaf and the Blind, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 35 mph.





## Gateway Boulevard between Fremont Boulevard and Lakeview Boulevard

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Fremont Boulevard	Lakeview Boulevard	40 mph	35 mph	39.8 mph	3	0.35

### **Conditions**

Between Fremont Boulevard and Lakeview Boulevard, Gateway Boulevard is striped for four lanes with a two-way turn lane until Bayside Parkway where it turns into a five lane road, with three lanes westbound and a raised median. The posted speed limit is 40 mph. The road is approximately 86 feet wide. There are traffic signals at Fremont Boulevard, Bayside Parkway and Lakeview Boulevard. The surrounding land use is all commercial with some open spaces. This segment has a bike route, no on-street parking, continuous sidewalk and a few driveways. The roadway is fairly flat and straight. Gateway Boulevard carries approximately 6,020 vehicles per day in the study area. A speed survey was conducted on May 15, 2008 and the 85<sup>th</sup> percentile speed was measured at 39.8 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 40 mph speed limit and the collision rate is below the expected rate for this road type. However, the 10 mph pace is from 29 mph to 38 mph and the suggested speed limit is above this range. Based on the 10 mph pace, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be decreased to 35 mph.

## Grimmer Boulevard between Paseo Padre Parkway (South End) and Paseo Padre Parkway (North End)

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Paseo Padre Parkway	Osgood Road	35 mph	40 mph	42.7 mph	0	0
Osgood Road	Fremont Boulevard	40 mph	40 mph	44.6 mph	1	0.09
Fremont Boulevard	Auto Mall Parkway	40 mph	40 mph	43.5 mph	25	0.51
Auto Mall Parkway	Blacow Road	40 mph	40 mph	45.2 mph	12	0.60
Blacow Road	Fremont Boulevard	35/40 mph	40 mph	44.0 mph	38	0.37
Fremont Boulevard	Paseo Padre Parkway	35 mph	35 mph	39.1 mph	9	1.13

### **Conditions**

For the purpose of this study, Grimmer Boulevard was separated into six (6) segments:

- Paseo Padre Parkway to Osgood Road
- Osgood Road to Fremont Boulevard
- Fremont Boulevard to Auto Mall Parkway
- Auto Mall Parkway to Blacow Road
- Blacow Road to Fremont Boulevard
- Fremont Boulevard to Paseo Padre Parkway

Between Paseo Padre Parkway and Osgood Road, Grimmer Boulevard is an undivided, two lane road with a posted speed limit of 35 mph. The road width is approximately 41 feet. On the west side of I-680, the land use is commercial on the north side of Grimmer Boulevard and open space on the south side. To the east of I-680, the land use is primarily non-fronting residential and open spaces with a park near Paseo Padre Parkway. This segment has bike lanes and continuous sidewalk, except next to the open space west of I-680. There are four-way stops located at Parkmeadow Drive and Paseo Padre Parkway. The intersection at Warm Springs Boulevard is signalized. There is vertical curve as the road crosses under Interstate 680. This segment of Grimmer Boulevard carries approximately 5,960 vehicles per day in the study area. A speed survey was conducted on March 13, 2008 and the 85<sup>th</sup> percentile speed was measured at 42.7 mph.

Between Osgood Road and Fremont Boulevard, Grimmer Boulevard is striped for four lanes with a raised median. The posted speed limit is 40 mph and the road width is approximately 84 feet. A horizontal curve occurs shortly after Fremont Boulevard and there is a slight vertical curve as the road passes under the railroad tracks. The surrounding land use mainly consists of open land south of Grimmer Boulevard with a few residences or businesses and the north side has commercial development near each limit with open land in between. There are bike lanes on both sides of the road and sidewalks exist only on the north side of a section between Old Warm Springs Boulevard and Osgood Road and both sides of a section between Fremont Boulevard and NUMMI Access Road. Traffic signals are located at the intersections of Fremont Boulevard, Old Warm Springs Boulevard, and Osgood Road. This segment of Grimmer Boulevard carries approximately 11,460 vehicles per day in the study area. A speed survey was conducted on March 13, 2008 and the 85<sup>th</sup> percentile speed was measured at 44.6 mph.

Between Fremont Boulevard and Auto Mall Parkway, Grimmer Boulevard is a four lane road with bike lanes on both sides of the road and a raised median, except for a short segment between Business Center Drive and Technology Drive, where a two-way turn lane exists. The road is approximately 84 feet wide. The posted speed limit is 40 mph and there are sidewalks on both sides. The land use is a mix of business and commercial on both sides of the segment. Pedestrian activity is high between Auto Mall Parkway and Technology Drive and low along the rest of the corridor. South Grimmer Boulevard has traffic signals at Fremont Boulevard, Technology Drive/Enterprise Street and Auto Mall Parkway. There is sharp horizontal curve. This segment of Grimmer Boulevard carries approximately 14,535 vehicles per day in the study area. A speed survey was conducted on April 25, 2008 and the 85<sup>th</sup> percentile speed was measured at 43.5 mph.

Between Auto Mall Parkway and Blacow Road, Grimmer Boulevard is a divided, four lane road with bike lanes on both sides of the road. The posted speed limit is 40 mph and the road is approximately 82 feet wide. The surrounding land use is mainly non-fronting residential neighborhoods, and apartment complexes. Pedestrian activity is high along this section. There is a slight horizontal curve on Grimmer Boulevard, and continuous sidewalk on both sides of the street. The signalized intersections are Auto Mall Parkway, Yellowstone Park Drive, Valpey Park Avenue, and Blacow Road. This segment of Grimmer Boulevard carries approximately 18,475 vehicles per day in the study area. A speed survey was conducted on March 13, 2008 and the 85<sup>th</sup> percentile speed was measured at 45.2 mph.

Between Blacow Road and Fremont Boulevard, Grimmer Boulevard is striped for four lanes with bike lanes on both sides of the road. This section is approximately 82 feet wide, north-south roadway. The posted speed limit is 35 mph except for a section between Irvington Avenue and Carol Avenue where the speed limit changes to 40 mph. Surrounding land use consists mainly of non-fronting residential areas and open spaces between Blacow Road and Irvington Avenue and a mix of business and commercial between Irvington Avenue and Fremont Boulevard. A school is located between Blacow Road and Carol Avenue. There is continuous sidewalk on both sides of the streets, no parking and high pedestrian activity. There is horizontal curve in this section. Traffic signals are located at Blacow Road, Carol Avenue, Davis Street, Bay Street, and Fremont Boulevard. This segment of Grimmer Boulevard carries approximately 22,780

vehicles per day in the study area. A speed survey was conducted on March 13, 2008 and the 85<sup>th</sup> percentile speed was measured at 44.0 mph.

Between Fremont Boulevard and Paseo Padre Parkway, Grimmer Boulevard is an undivided, two lane road with a posted speed limit of 35 mph. The road width is approximately 38 feet. A creek runs along the west side of Grimmer Boulevard and land use is mostly undeveloped. There is no sidewalk on the west side of the road, but there is a bike lane. On the east side, there are apartments and fronting residential neighborhood. There is sidewalk on the east side of Grimmer Boulevard, but no bike lane. There are a few driveways, with moderate pedestrian activity. The intersection of Grimmer Boulevard and Paseo Padre Parkway is signalized. This segment of the road is fairly straight and flat and carries approximately 16,430 vehicles per day in the study area. A speed survey was conducted on March 13, 2008 and the 85<sup>th</sup> percentile speed was measured at 39.1 mph.

### **Comments and Recommendations**

The collision rates for all segments of Grimmer Road were below the expected rate for this type of roadway.

Between Paseo Padre Parkway and Osgood Road, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit. However, the 10 mph pace is from 35 mph to 44 mph and the suggested speed limit falls just above this range. Due to the 10 mph pace, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 40 mph, increased from 35 mph.

Between Osgood Road and Fremont Boulevard, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit. The 10 mph pace is 36 mph to 45 mph. However, to be consistent with the adjacent segment, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain 40 mph.

Between Fremont Boulevard and Auto Mall Parkway, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit. The 10 mph pace is 35 mph to 44 mph. However, due to high pedestrian activity and to be consistent with adjacent segments, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain 40 mph.

Between Auto Mall Parkway and Blacow Road, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit. The 10 mph pace is 37 mph to 46 mph. Due to high pedestrian activity and to be consistent with adjacent street segments, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain at 40 mph.

Between Blacow Road and Fremont Boulevard, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit. However, the 10 mph pace is from 35 mph to 44 mph and the suggested speed limit falls above this range. Due to the 10 mph pace and pedestrian traffic, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain 40 mph all along the segment.



Between Fremont Boulevard and Paseo Padre Parkway, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit. However, the land use is residential and there is moderate pedestrian activity in this area. The residential density and pedestrian volume justify the downgrading of the 85<sup>th</sup> percentile speed by 5 mph. Therefore, it is recommended that the posted speed limit remain at 35 mph.



## Guardino Drive between Mowry Avenue and Stevenson Boulevard

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Mowry Avenue	Stevenson Boulevard	25/30 mph	30 mph	33.6 mph	0	0

### **Conditions**

Between Stevenson Boulevard and Walnut Avenue and between Litchfield Avenue and Mowry Avenue, Guardino Drive is approximately 60 feet wide two lane road with a two-way turn lane and on-street parking and bike lanes on both sides of the road. Between Walnut Avenue and Litchfield Avenue, Guardino Drive is approximately 24 feet wide two lane roadway with no on-street parking or bike lanes. The posted speed limit is 25 mph between Stevenson Boulevard and Walnut Avenue and 30 mph between Walnut Avenue and Mowry Avenue. There are continuous sidewalks and several horizontal curves. There is moderate pedestrian and bicycle activity. The land use is primarily apartments. Mowry Avenue, Walnut Avenue, and Stevenson Boulevard are signalized intersections. Guardino Drive carries approximately 3,180 vehicles per day in the study area. A speed survey was conducted on March 27, 2008 and the 85<sup>th</sup> percentile speed was measured at 33.6 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 35 mph speed limit and the collision rate is below the expected rate for this type of road. However, the suggested speed limit does not fall within the 10 mph pace (from 25 mph to 34 mph). Based on the 10 mph pace and moderate pedestrian activity, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 30 mph.

## Hansen Avenue between Blacow Road and Dusterberry Way

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Blacow Road	Yolo Terrace	35 mph	35 mph	37.3 mph	4	3.70
Yolo Terrace	Dusterberry Way	25 mph	25 mph	28.1 mph	3	5.02

### **Conditions**

For the purpose of this study, Hansen Avenue was separated into two (2) segments:

- Blacow Road to Yolo Terrace
- Yolo Terrace to Dusterberry Road

Between Blacow Road and Yolo Terrace, Hansen Avenue is an undivided, two lane road and is 36 feet wide. The posted speed limit is 35 mph. The alignment of this roadway is fairly straight and flat. The surrounding land use is primarily apartments and fronting residential, with a school located on the northwest side of the road near Cabrillo Drive. There is a railroad track that runs alongside Hansen on the southeast side of this segment and there are no developments on that side of the roadway. There is parking and sidewalk only on the northwest side of Hansen Avenue. A one-way stop is located on Hansen Avenue at Blacow Road. Hansen Avenue carries approximately 2,120 vehicles per day in this segment. A speed survey was conducted on March 25, 2008 and the 85<sup>th</sup> percentile speed was measured at 37.3 mph.

Between Yolo Terrace and Dusterberry Way, Hansen Avenue is an undivided, two lane road with a posted speed limit of 25 mph. The road width is 36 feet. On-street parking is permitted on both sides along the segment. There is a mix of non-fronting and fronting apartments. There are a few driveways and no bike lane. There are two large horizontal curves on this relatively short segment. There is continuous sidewalk on both sides of the road along most of the corridor except approximately 400 feet from Yolo Terrace on the southeast side of the road. A two-way stop is located on Hansen Avenue at Dusterberry Way. This segment of Hansen Avenue carries approximately 2,375 vehicles per day in the study area. A speed survey was conducted on March 25, 2008 and the 85<sup>th</sup> percentile speed was measured at 28.1 mph.

### **Comments and Recommendations**

Between Blacow Road and Yolo Terrace, the 85<sup>th</sup> percentile speed suggests a 35 mph speed limit. However, four (4) collisions were reported on this roadway segment which results in a higher than expected collision rate. The 10 mph pace is from 27 mph to 36 mph and the suggested speed limit falls within this range. Therefore based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit remain at 35 mph.



Between Yolo Terrace and Dusterberry Way, the 85<sup>th</sup> percentile speed suggests a 30 mph speed limit. However, three (3) collisions were reported on this roadway segment which is a higher than expected collision rate for this type of roadway. Also, the suggested speed limit is just above the 10 mph pace (from 20 mph to 29 mph). Based on a higher than expected collision rate and the 10 mph pace, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain at 25 mph.





## Hastings Street between Country Drive and Capitol Avenue

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Country Drive	Capitol Avenue	30 mph	30 mph	29.5 mph	2	3.59

### **Conditions**

Hastings Street is an undivided, two lane road between Country Drive and Pennsylvania Avenue and a four lane road from Pennsylvania Avenue to Capitol Avenue. The posted speed limit is 30 mph and roadway is approximately 61 feet wide. The alignment of the road is straight except for a short reverse curve in the section between Country Drive and Pennsylvania Avenue. This segment is surrounded by apartments on both sides of the road and Centerville Community Park is located near Country Drive. There is on-street parking allowed and continuous sidewalks on both sides of the road. A four-way stop is located at Country Drive, two-way stop at Capitol Avenue, and the intersection at Mowry Avenue is signalized. Hastings Street carries approximately 1,965 vehicles per day in the study area. A speed survey was conducted on April 2, 2008 and the 85<sup>th</sup> percentile speed was measured at 29.5 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 30 mph speed limit. The collision rate was higher than the expected rate, although there were only two (2) collisions during the study period. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit remain at 30 mph.



## High Street between Grimmer Boulevard and Chapel Way

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Grimmer Boulevard	Chapel Way	30 mph	25 mph	29.9 mph	2	2.67

### **Conditions**

High Street is an undivided, two lane road with a posted speed limit of 30 mph. The road is 40 feet wide. On-street parking is permitted along the corridor and there are mainly apartments fronting the roadway. There is continuous sidewalk on both sides of the street. A four-way stop is located at Chapel Way and there is a one-way stop on High Street at Grimmer Boulevard. There is a high amount of pedestrian activity. High Street carries approximately 2,950 vehicles per day in the study area. A speed survey was conducted on May 6, 2008 and the 85<sup>th</sup> percentile speed was measured at 29.9 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 30 mph speed limit. The collision rate was higher than the expected rate, although there were only two (2) collisions during the study period. The suggested speed limit does not fall within the 10 mph pace (from 20 mph to 29 mph). Based on the 10 mph pace, a higher than expected collision rate, and high pedestrian activity, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be decreased to 25 mph.



## **Irvington Avenue between Grimmer Boulevard and Fremont Boulevard**

<i><b>Segment From:</b></i>	<i><b>To:</b></i>	<i><b>Posted Limit:</b></i>	<i><b>Proposed Limit:</b></i>	<i><b>85<sup>th</sup> Percentile Speed:</b></i>	<i><b>Num. of Collisions</b></i>	<i><b>Collision Rate (ACC/MVM):</b></i>
Grimmer Boulevard	Fremont Boulevard	30 mph	30 mph	33.6 mph	0	0

### **Conditions**

Irvington Avenue is a two lane road with a two-way turn lane. The posted speed limit is 30 mph and the road width is 64 feet. There are bike lanes and continuous sidewalks on both sides of the street, and some on-street parking. The surrounding land use includes fronting residential between Grimmer Boulevard and Thurston Street and a mix of fronting and non-fronting apartments between Fremont Boulevard and Chapel Way. There is a cemetery and school near Chapel Way. There is a moderate amount of pedestrian activity along this segment. Fremont Boulevard and Irvington Avenue is signalized and there is a four-way stop at Chapel Way. Irvington Avenue carries approximately 3,995 vehicles per day in the study area. A speed survey was conducted on May 16, 2008 and the 85<sup>th</sup> percentile speed was measured at 33.6 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 35 mph speed limit and the collision rate is below the expected rate for this road type. The 10 mph pace is 26 mph to 35 mph, with the suggested speed limit at the upper end of that range. Based on the 10 mph pace, the residential density, and pedestrian activity, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain at 30 mph.



## Isherwood Way between Paseo Padre Parkway and City Limits

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Paseo Padre Parkway	City Limits	35 mph	35 mph	37.6 mph	1	0.34

### **Conditions**

Isherwood Way is an undivided, two lane road with a posted speed limit of 35 mph. The roadway is 36 feet wide. The surrounding land use is a regional recreation area to the east and non-fronting residential neighborhoods to the west. The alignment of the road is straight with a slight vertical curve near Paseo Padre Parkway due to the bridge over Alameda Creek. This corridor has sidewalk on both sides of the road and no on-street parking. The intersection at Paseo Padre Parkway is signalized and Chaplin Drive and Barnard Drive are stop controlled. Isherwood Way carries approximately 9,700 vehicles per day in the study area. A speed survey was conducted on April 25, 2008 and the 85<sup>th</sup> percentile speed was measured at 37.6 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 40 mph speed limit and the collision rate is below the expected rate for this road type. However, the suggested speed limit is above the 10 mph pace (from 30 mph to 39 mph). Based on the 10 mph pace, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain at 35 mph.



## Kaiser Drive between Paseo Padre Parkway and Ardenwood Boulevard

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Paseo Padre Parkway	Ardenwood Boulevard	35 mph	40 mph	39.7 mph	1	0.43

### **Conditions**

This segment of Kaiser Drive is a four lane road with a raised median. The surrounding land use is commercial and office. The posted speed limit is 35 mph and the road is approximately 83 feet wide. There is continuous sidewalk on both sides of the street. The intersection at Paseo Padre Parkway is stop controlled and Ardenwood Boulevard is signalized. Kaiser Drive carries approximately 3,482 vehicles per day in the study area. A speed survey was conducted on March 27, 2008 and the 85<sup>th</sup> percentile speed was measured at 39.7 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 40 mph speed limit and the collision rate is below the expected rate for this road type. Based on the 85<sup>th</sup> percentile speed it is recommended that the posted speed limit be 40 mph, increased from the current speed limit of 35 mph.

## Kato Road between Milmont Drive and Warm Springs Boulevard

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Milmont Drive	Warm Springs Boulevard	40 mph	40 mph	38.5 mph	8	1.29
Auburn Street	Milmont Drive	35 mph	40 mph	43.9 mph	9	1.51

### **Conditions**

For the purpose of this study, Kato Road was separated into two (2) segments:

- Milmont Drive to Warm Springs Boulevard
- Auburn Street to Milmont Drive

Between Milmont Drive and Warm Springs Boulevard, Kato Road is a four lane road with a two-way turn lane. The alignment of the road is straight, except for a slight horizontal curve near Warm Springs Boulevard. The posted speed limit is 40 mph and the roadway width is approximately 63 feet. The surrounding land use is primarily office/business on the north side of Kato Road and the south side is primarily multi-family residential. There is a cemetery located at the corner of Kato Road and Warm Springs Boulevard. Kato Road has bike lanes and sidewalks but no on-street parking. There are traffic signals at Milmont Drive and Warm Springs Boulevard. Kato Road carries approximately 12,725 vehicles per day. A speed survey was conducted on March 26, 2008 and the 85<sup>th</sup> percentile speed was measured at 38.5 mph.

Between Auburn Street and Milmont Drive, Kato Road is an undivided, two lane road with a posted speed limit of 35 mph. The alignment of the road is mostly straight with a 90 degree horizontal curve near Milmont Drive, which has a warning sign of 30 mph. The road is approximately 33 feet wide. There are scattered segments of sidewalk on the east side of Kato Road. About one-half of the segment has poor pavement, while the rest is in moderate condition. There is a wide dirt shoulder on the west side of Kato Road that runs parallel to I-880. On the east side of Kato Road the land use is primarily office/businesses. The intersection at Kato Road and Milmont Drive is signalized. This segment of Kato Road carries approximately 5,450 vehicles per day in the study area. A speed survey was conducted on March 26, 2008 and the 85<sup>th</sup> percentile speed was measured at 43.9 mph.

### **Comments and Recommendations**

The collision rates for both segments of Kato Road were below the expected rate for this type of road.

Between Milmont Drive and Warm Springs Boulevard, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit. The 10 mph pace ranges from 31 mph to 40 mph in this segment. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit remain at 40 mph.



Between Auburn Street and Milmont Drive, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit. However, the suggested speed limit does not fall within the 10 mph pace (from 35 mph to 44 mph). Based on the 10 mph pace, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 40 mph, increased from the current speed limit of 35 mph.



## Lakeview Boulevard between West Warren Avenue and Fremont Boulevard

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
West Warren Avenue	Fremont Boulevard	35 mph	35 mph	41.7 mph	3	0.74

### **Conditions**

Lakeview Boulevard is a two lane road with a two-way turn lane from West Warren Avenue to Gateway Boulevard and an undivided two lane road from Gateway Boulevard to Fremont Boulevard. The current speed limit is posted at 35 mph with a warning sign of 30 mph on the curve near Fremont Boulevard. The road is 32 to 44 feet wide. There are several horizontal and vertical curves from West Warren Avenue to Gateway Boulevard and near Fremont Boulevard, but it is straight and flat when Lakeview Boulevard runs parallel to I-880. This corridor is fronted by many businesses, undeveloped land and a few driveways. There is intermittent sidewalk except when the road is adjacent to the freeway. No on-street parking is allowed and the street is closed from 11 pm to 6 am. There is a traffic signal at Gateway Boulevard and a stop sign at Fremont Boulevard. Currently during the survey, there is construction going on at West Warren Avenue so that intersection is changing. Lakeview Boulevard carries approximately 2,570 vehicles per day in the study area. A speed survey was conducted on March 26, 2008 and the 85<sup>th</sup> percentile speed was measured at 41.7 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 40 mph speed limit and the collision rate is below the expected rate for this road type. The 10 mph pace ranges from 31 mph to 40 mph and the suggested speed limit is at the upper range of that range. Based on the 10 mph pace and to be consistent with adjacent speed limits in the area, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed remain at 35 mph.





## Landing Parkway between Fremont Boulevard and West Warren Avenue

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Fremont Boulevard	West Warren Avenue	30 mph	35 mph	40.7 mph	3	1.39

### **Conditions**

Landing Parkway is a two lane road with a two-way turn lane. This segment of road is fronted by offices and several hotels. The roadway has two travel lanes with a two-way turn lane, which changes to an undivided road and the posted speed limit is 30 mph. The road width is approximately 36 feet. There are three significant horizontal curves along this corridor and the one closest to West Warren Avenue has a warning speed limit sign of 20 mph. There are sidewalks along most of the segment, except on the east side of Landing Parkway adjacent to I-880. A stop is located on Landing Parkway at Fremont Boulevard and there is a four-way stop at the intersection of West Warren Avenue. Landing Parkway carries approximately 2,440 vehicles per day. A speed survey was conducted on May 15, 2008 and the 85<sup>th</sup> percentile speed was measured at 40.7 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 40 mph speed limit and the collision rate is below the expected rate for this road type. The 10 mph pace ranges from 32 mph to 41 mph in this segment. Due to the horizontal curves in the roadway, with curve speeds as low as 20 mph, it is recommended that the speed be downgraded from the 85<sup>th</sup> percentile speed by 5 mph. Therefore, it is recommended that the posted speed limit be 35 mph, increased from the current speed limit of 30 mph.

## Liberty Street between Stevenson Boulevard and Capitol Avenue

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Walnut Avenue	Stevenson Boulevard	30 mph	30 mph	36.0 mph	3	1.48
Capitol Avenue	Walnut Avenue	30 mph	30 mph	35.3 mph	2	1.98

### **Conditions**

For the purpose of this study, Liberty Street was separated into two (2) segments:

- Stevenson Boulevard to Walnut Avenue
- Capitol Avenue to Walnut Avenue

Between Walnut Avenue and Stevenson Boulevard, Liberty Street is undivided with four travel lanes until Sundale Drive, where it goes down to two travel lanes until Stevenson Boulevard. The roadway fronts primarily office with some townhouses near Stevenson Boulevard and there is moderate to high pedestrian activity. The road is approximately 36 feet wide. There is a short segment of on-street parking in front of the residential area and continuous sidewalk on both sides of the street. The alignment of the road is straight and flat other than the slight horizontal curve near Stevenson Boulevard. The posted speed limit is 30 mph. There are traffic signals at the intersections of Walnut Avenue and Stevenson Boulevard. This segment of Liberty Street carries approximately 4,060 vehicles per day in the study area. A speed survey was conducted on March 26, 2008 and the 85<sup>th</sup> percentile speed was measured at 36.0 mph.

Between Capitol and Walnut Avenue, Liberty Street is undivided and has two travel lanes in each direction. The surrounding land uses are office mixed with commercial and there is moderate to high pedestrian activity. The posted speed limit is 30 mph and the roadway is approximately 44 feet wide. There is no on-street parking along this segment and continuous sidewalks on both sides of the street. There is a stop sign at the intersection of Capitol Avenue and a traffic signal at Walnut Avenue. This segment of Liberty Street carries approximately 3,580 vehicles per day in the study area. A speed survey was conducted on March 26, 2008 and the 85<sup>th</sup> percentile speed was measured at 35.3 mph.

### **Comments and Recommendations**

The collision rates for both segments of Liberty Street were below the expected rate for this type of road.

Between Walnut Avenue and Stevenson Boulevard, the 85<sup>th</sup> percentile speed suggests a 35 mph speed limit. The 10 mph pace ranges from 28 mph to 37 mph in this segment. However, based on moderate to high pedestrian activity and to be consistent with adjacent street segments in the



area, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed remain 30 mph.

Between Capitol Avenue and Walnut Avenue, the 85<sup>th</sup> percentile speed suggests a 35 mph speed limit. The 10 mph pace ranges from 28 mph to 37 mph in this segment. However, based on moderate to high pedestrian activity and to be consistent with adjacent street segments in the area, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed remain 30 mph.

## Lowry Road between Alvarado Boulevard and City Limits

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Alvarado Boulevard	Lark Way	25 mph	30 mph	37.2 mph	1	0.54
Lark Way	City Limits	35 mph	40 mph	42.6 mph	1	0.14

### **Conditions**

For the purpose of this study, Lowry Road was separated into two (2) segments:

- Alvarado Boulevard to Lark Way
- Lark Way to City Limits

Between Alvarado Boulevard and Lark Way, Lowry Road is an undivided, two lane roadway that fronts a school, a church, a park, an empty lot, and fronting single-family residential properties. The posted speed limit is 25 mph and the roadway is approximately 38 feet wide. There is continuous sidewalk on both sides of the street, except for the section in front of the park. There is on-street parking and some residential driveways. A traffic signal is located at the intersection of Alvarado Boulevard. This segment of Lowry Road carries approximately 9,835 vehicles per day in the study area. A speed survey was conducted on March 26, 2008 and the 85<sup>th</sup> percentile speed was measured at 37.2 mph.

Between Lark Way and the City Limits, Lowry Road is two lanes, undivided, and has a roadway width of approximately 38 feet. The posted speed limit is 35 mph. The surrounding land uses include a park, open space, and Alameda Creek on the east side and non-fronting residential neighborhoods on the west. There is sidewalk on the west side and there is no on-street parking. The road is straight, but there is a vertical curve as the roadway crosses underneath the railroad tracks near the middle of the segment. This segment of Lowry Road carries approximately 9,550 vehicles per day in the study area. A speed survey was conducted on March 26, 2008 and the 85<sup>th</sup> percentile speed was measured at 42.6 mph.

### **Comments and Recommendations**

Between Alvarado Boulevard and Lark Way, the 85<sup>th</sup> percentile speed suggests a 35 mph speed limit and the collision rate is below the expected rate for this road type. The 10 mph pace ranges from 28 mph to 37 mph in this segment. Due to the location of a nearby school, church, parks, residential properties, and higher than typical pedestrian activity, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 30 mph, increased from the current speed limit of 25 mph.

Between Lark Way and the City Limits, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit and the collision rate is below the expected rate for this road type. However, the suggested speed



limit is much higher than the 10 mph pace of 33 mph to 42 mph. Based on the 10 mph pace, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 40 mph, increased from the current speed limit of 35 mph.



### **Milmont Drive between Page Avenue and City Limits**

<i><b>Segment From:</b></i>	<i><b>To:</b></i>	<i><b>Posted Limit:</b></i>	<i><b>Proposed Limit:</b></i>	<i><b>85<sup>th</sup> Percentile Speed:</b></i>	<i><b>Num. of Collisions</b></i>	<i><b>Collision Rate (ACC/MVM):</b></i>
Page Avenue	City Limits	35 mph	40 mph	39.1 mph	5	1.55

#### **Conditions**

Milmont Drive is an undivided, two lane road with a width of approximately 44 feet. The surrounding land use is primarily offices and businesses. There is some on-street parking south of Kato Road. The posted speed limit is mostly 35 mph along the corridor, except for the southbound traffic, south of Kato Road, where it turns into 30 mph. There is a 15 mph warning speed limit sign for the sharp horizontal curve onto Page Avenue. There is sidewalk only on the west side of the road, north of Kato Road. A traffic signal is located at the intersection of Kato Road. Milmont Drive carries approximately 3,380 vehicles per day in the study area. A speed survey was conducted on May 12, 2008 and the 85<sup>th</sup> percentile speed was measured at 39.1 mph.

#### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 40 mph speed limit and the collision rate is below the expected rate for this road type. The 10 mph pace ranges from 31 mph to 40 mph in this segment. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit be 40 mph, increased from the current speed limit of 35 mph.

## Mission Boulevard between Mission Road and St. Joseph's Terrace

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Mission Road	St. Joseph's Terrace	35 mph	35 mph	38.0 mph	6	0.64
St. Joseph's Terrace	Pine Street	35 mph	35 mph	35.5 mph	12	1.08
Pine Street	Durham Road	45 mph	45 mph	47.7 mph	8	0.53
Durham Road	Curtner Road	45 mph	45 mph	47.7 mph	2	0.12

### **Conditions**

For the purpose of this study, Mission Boulevard was separated into four (14) segments:

- Mission Road to St. Joseph's Terrace
- St. Joseph's Terrace to Pine Street
- Pine Street to Durham Road
- Durham Road to Curtner Road

Between Mission Road and St. Joseph's Terrace, Mission Boulevard is a four lane roadway with a raised median and no bike lane until just north of Mill Creek Road, where it turns into an undivided, two lane roadway with no bike lane. The posted speed limit is 35 mph and the road is approximately 51 feet wide. The surrounding land use is commercial, a gas station, and non-fronting residential neighborhoods. There is continuous sidewalk primarily on the west side of the road and a short segment of on-street parking after Starr Street. A traffic signal is located at the intersection of Mission Road. This segment of Mission Boulevard carries approximately 23,765 vehicles per day in the study area. A speed survey was conducted on March 20, 2008 and the 85<sup>th</sup> percentile speed was measured at 38.0 mph.

Between St. Joseph's Terrace and Pine Street, Mission Boulevard is a two lane roadway with a two-way turn lane and bike lane. The posted speed limit is 35 mph north of Anza Street and 40 mph south of Anza Street. The road is approximately 47 feet wide. The surrounding land use includes the Mission San Jose, Ohlone College, along with businesses, commercial, and non-fronting residential developments. There is on-street parking for a majority of this segment and continuous sidewalk. The pedestrian activity is moderate in this segment. Traffic signals are located at the intersections of Washington Boulevard, Anza Street, and Pine Street. This segment of Mission Boulevard carries approximately 15,820 vehicles per day in the study area. A speed survey was conducted on March 20, 2008 and the 85<sup>th</sup> percentile speed was measured at 35.5 mph.

Between Pine Street and Durham Road, Mission Boulevard is a four lane roadway with bike lanes and raised median. The road is approximately 88 feet wide and the posted speed limit is 40 mph until Hunter Lane, where it changes to 45 mph. The surrounding land uses include some businesses and multi-family housing until Valley Vista Court and then primarily the rears of single-family residential neighborhoods and a cemetery. There is continuous sidewalk on both sides of the street and no on-street parking is allowed. There are traffic signals located at the intersections of Pine Street, Hunter Lane, and Durham Road. This segment of Mission Boulevard carries approximately 15,695 vehicles per day in the study area. A speed survey was conducted on March 6, 2008 and the 85<sup>th</sup> percentile speed was measured at 47.7 mph.

Between Durham Road and Curtner Road, Mission Boulevard is a divided, four lane roadway with bike lanes (bike route close to Curtner Road). The roadway is approximately 86 feet wide and there are continuous sidewalks on both sides of the road. The posted speed limit is 45 mph with warning signs of 35 mph on the curve near Curtner Road. The surrounding land use is non-fronting residential neighborhoods. No on-street parking is allowed along this segment. There are both horizontal and vertical curves along this segment. Traffic signals are located at Cougar Drive, South Grimmer Boulevard, Stanford Avenue, and Paseo Padre Parkway. This segment of Mission Boulevard carries approximately 13,625 vehicles per day in the study area. A speed survey was conducted on March 6, 2008 and the 85<sup>th</sup> percentile speed was measured at 47.7 mph.

### **Comments and Recommendations**

Between Mission Road and St. Joseph's Terrace, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit and the collision rate is below the expected rate for this road type. The 10 mph pace ranges from 30 mph to 39 mph and the suggested speed limit is just above this range. Based on the 10 mph pace, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain at 35 mph.

Between St. Joseph's Terrace and Pine Street, the 85<sup>th</sup> percentile speed suggests a 35 mph speed limit and the collision rate is below the expected rate for this road type. The 10 mph pace ranges from 28 mph to 37 mph in the segment. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit remain at 35 mph.

Between Pine Street and Durham Road, the 85<sup>th</sup> percentile speed suggests a 50 mph speed limit and the collision rate is below the expected rate for this road type. However, the suggested speed limit does not fall within the 10 mph pace (from 40 mph to 49 mph). In addition, the speed limit should be set within 10 mph of an adjacent segment. Based on the 10 mph pace and the adjacent street speed limit, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain 45 mph.

Between Durham Road and Curtner Road, the 85<sup>th</sup> percentile speed suggests a 50 mph speed limit and the collision rate is below the expected rate for this road type. However, the suggested speed limit does not fall within the 10 mph pace (from 38 mph to 47 mph). Based on the 10 mph pace, and to be consistent with the adjacent segment, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain at 45 mph.



## Mowry Avenue between Paseo Padre Parkway and Interstate 880

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Paseo Padre Parkway	Peralta Boulevard	40 mph	35 mph	32.6 mph	9	0.41
Argonaut Way	Paseo Padre Parkway	40 mph	40 mph	42.0 mph	46	1.36
Interstate 880	Argonaut Way	40 mph	40 mph	45.4 mph	76	1.17

### **Conditions**

For the purpose of this study, Mowry Avenue was separated into three (3) segments:

- Paseo Padre Parkway to Peralta Boulevard
- Argonaut Way to Paseo Padre Parkway
- Interstate 880 to Argonaut Way

Between Paseo Padre Parkway and Peralta Boulevard, Mowry Avenue is divided by a raised median and has five lanes, with two lanes eastbound and three lanes westbound, between Peralta Boulevard and Waterside Circle and six lanes between Waterside Circle and Paseo Padre Parkway. The posted speed limit in this segment is 40 mph. The surrounding land use includes apartments, Bay Area Rapid Transit (BART) Station, a hospital, medical offices, and commercial development. The road is approximately 96-104 feet wide. There are continuous sidewalks on both sides of the street and a couple of horizontal curves. There are a couple of sections along that corridor that allow on-street parking. Pedestrian volumes are high along this segment, while observed bicycle volumes are low. Traffic signals are located at the intersections of Paseo Padre Parkway, Civic Center Drive, Parkside Drive, and Peralta Boulevard. This segment of Mowry Avenue carries approximately 25,235 vehicles per day in the study area. A speed survey was conducted on March 19, 2008 and the 85<sup>th</sup> percentile speed was measured at 32.6 mph.

Between Argonaut Way and Paseo Padre Parkway, Mowry Avenue has six travel lanes and a raised median. The surrounding land use is primarily commercial with shopping centers and apartments. The road is approximately 103 feet wide and the posted speed limit is 40 mph. There is a bike lane from Fremont Boulevard to Argonaut Way. There are continuous sidewalks on both sides of the street and on-street parking is not permitted. This portion of Mowry Avenue is labeled as a truck route and has high pedestrian volumes. Traffic signals are located at the intersections of Paseo Padre Parkway, Hastings Street, State Street, Fremont Boulevard, and Argonaut Way. This segment of Mowry Avenue carries approximately 40,515 vehicles per day in the study area. A speed survey was conducted on March 19, 2008 and the 85<sup>th</sup> percentile speed was measured at 42.0 mph.

Between I-880 and Argonaut Way, Mowry Avenue is divided, six lanes, and approximately 91 feet wide. The posted speed limit is 40 mph in this section. The surrounding land use includes non-fronting residential neighborhoods (on frontage roads adjacent to roadway), commercial, and a church. There are sidewalks on both sides of the street, but on-street parking is not permitted. This portion of Mowry Avenue is labeled as a truck route and has high pedestrian volumes. There are traffic signals at Argonaut Way, Logan Drive, Glenview Drive, Blacow Road, Farwell Drive, and the I-880 NB off-ramp. This segment of Mowry Avenue carries approximately 46,920 vehicles per day in the study area. A speed survey was conducted on March 19, 2008 and the 85<sup>th</sup> percentile speed was measured at 45.4 mph.

### **Comments and Recommendations**

The collision rates for all segments of Mowry Avenue were below the expected rate for this type of road.

Between Paseo Padre Parkway and Peralta Boulevard, the 85<sup>th</sup> percentile speed suggests a 35 mph speed limit. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit be 35 mph, decreased from the current speed limit of 40 mph.

Between Argonaut Way and Paseo Padre Parkway, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit remain at 40 mph.

Between I-880 and Argonaut Way, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit and the collision rate is below the expected rate for this road type. To be consistent with the adjacent street segments, it is recommended that the posted speed limit remain 40 mph.

## Niles Boulevard between City Limits and Hillview Drive

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
City Limits	Rock Avenue	35 mph	40 mph	43.6 mph	4	0.42
Rock Avenue	Hillview Drive	35 mph	35 mph	36.6 mph	3	0.60

### **Conditions**

For the purpose of this study, Niles Boulevard was separated into two (2) segments:

- City Limits to Rock Avenue
- Rock Avenue to Hillview Drive

Between the city limits and Rock Avenue, Niles Boulevard is approximately 77 feet wide with a posted speed limit of 35 mph. Between Carnation Way and Rock Avenue, the segment is a four lane divided road with sidewalks and bike lanes on both sides of the street. Between the city limits and Carnation Way, the segment is a two lane undivided roadway with no sidewalk. The surrounding land use is primarily non-fronting residential neighborhoods. There are some slight horizontal curves and a vertical curve as the roadway goes over railroad tracks. This segment of Niles Boulevard carries approximately 14,280 vehicles per day in the study area. A speed survey was conducted on March 19, 2008 and the 85<sup>th</sup> percentile speed was measured at 43.6 mph.

Between Rock Avenue and Hillview Drive, Niles Boulevard is approximately 67 feet wide with a posted speed limit of 35 mph, except for eastbound traffic after Nursery Avenue, which has a posted speed limit of 25 mph. Between Rock Avenue and just west of Nursery Avenue, the roadway is a four lane undivided roadway with a two-way left-turn lane with sidewalks and on-street parking on both sides of the street. Between just west of Nursery Avenue and Hillview Drive, the roadway is three lane undivided roadway with a two-way left-turn lane. This roadway section has two westbound travel lanes and one eastbound travel lane, which are separated with a two-way turn lane. There are sidewalk and bike lanes on both sides of the street, as well as portions with intermittent on-street parking. Pedestrian activity is moderate along this corridor. There is a traffic signal at Nursery Avenue. This segment of Niles Boulevard carries approximately 6,740 vehicles per day in the study area. A speed survey was conducted on April 1, 2008 and the 85<sup>th</sup> percentile speed was measured at 36.6 mph.

### **Comments and Recommendations**

The collision rates for both segments of Niles Boulevard were below the expected rate for this type of road.

Between the city limits and Rock Avenue, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit. However, the 10 mph pace is from 35 mph to 44 mph and the suggested speed limit is just



above the range. Also, the adjacent segment has a suggested speed limit of 35 mph. Due to the 10 mph pace and to limit the change in speed with the adjacent segment to 5 mph, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 40 mph, increased from the existing speed limit of 35 mph.

Between Rock Avenue and Hillview Drive, the 85<sup>th</sup> percentile speed suggests a 35 mph speed limit and the collision rate is below the expected rate for this road type. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit be 35 mph.



## Nobel Drive/Bunche Drive between Auto Mall Parkway and Boscell Road

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Auto Mall Parkway	Boscell Road	30 mph	35 mph	38.5 mph	2	1.43

### **Conditions**

This segment of Nobel Drive/Bunche Drive is approximately 48 feet wide, striped for two lanes with a two-way left-turn lane, and undivided. The existing speed limit is 30 mph. This section has a ninety degree horizontal curve west of Cushing Parkway. There are sidewalks and bike lanes along both sides of the street, but on-street parking is not permitted. Observed truck traffic was moderate in this segment. The primary land uses are business/office and open spaces. A traffic signal is located at Cushing Parkway. Nobel Drive/Bunche Drive carries approximately 2,050 vehicles per day in the study area. A speed survey was conducted on April 1, 2008 and the 85<sup>th</sup> percentile speed was measured at 38.5 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 40 mph speed limit and the collision rate is below the expected for this type of road. However, the suggested speed limit does not fall within the 10 mph pace (from 30 mph to 39 mph). Based the roadway curvature and the 10 mph pace, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 35 mph, increased from the existing speed limit of 30 mph.



## Old Canyon Road between Niles Canyon Road and Clarke Drive

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Niles Canyon Road	Clarke Drive	30 mph	35 mph	39.4 mph	0	0

### **Conditions**

Old Canyon Road is approximately 36 feet wide, striped for two lanes, and undivided with a posted speed limit of 30 mph. The surrounding land uses include a park, Alameda Creek, and non-fronting residential neighborhoods. There are sidewalks present in some sections. On-street parking is permitted west of the bridge overcrossing. There are a few slight horizontal curves. Old Canyon Road carries approximately 2,690 vehicles per day in the study area. A speed survey was conducted on March 27, 2008 and the 85<sup>th</sup> percentile speed was measured at 39.4 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 40 mph speed limit and the collision rate is below the expected rate for this road type. However, the suggested speed limit falls just above the 10 mph pace (from 30 mph to 39 mph) range. Due to the location of a nearby park and the 10 mph pace, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 35 mph, increased from the existing speed limit of 30 mph.



## Old Warm Springs Boulevard between Fremont Boulevard and South Grimmer Boulevard

<i><b>Segment From:</b></i>	<i><b>To:</b></i>	<i><b>Posted Limit:</b></i>	<i><b>Proposed Limit:</b></i>	<i><b>85<sup>th</sup> Percentile Speed:</b></i>	<i><b>Num. of Collisions</b></i>	<i><b>Collision Rate (ACC/MVM):</b></i>
Fremont Boulevard	South Grimmer Boulevard	40 mph	40 mph	37.8 mph	3	1.07

### **Conditions**

This segment of Old Warm Springs Boulevard is approximately 42 feet wide, striped for two lanes, and undivided with a posted speed limit of 40 mph. The surrounding land use is primarily industrial and commercial frontage. A creek passes underneath the roadway and the railroad tracks cross through at grade. There are sidewalks along both sides of the street west of the railroad tracks. A traffic signal is located at South Grimmer Boulevard. Old Warm Springs Boulevard carries approximately 5,080 vehicles per day in the study area. A speed survey was conducted on March 27, 2008 and the 85<sup>th</sup> percentile speed was measured at 37.8 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 40 mph speed limit and the collision rate is below the expected rate for this road type. The 10 mph pace is 30 mph to 39 mph on this segment. Although the suggested speed is slightly above the 10 mph, based on observed conditions it is recommended that the speed limit remain 40 mph, based on the 85<sup>th</sup> percentile speed.

## Osgood Road between Washington Boulevard and South Grimmer Boulevard

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Washington Boulevard	Auto Mall Parkway	35 mph	40 mph	43.5 mph	10	0.53
Auto Mall Parkway	South Grimmer Boulevard	40 mph	40 mph	43.7 mph	4	0.40

### **Conditions**

For the purpose of this study, Osgood Road was separated into two (2) segments:

- Washington Boulevard to Auto Mall Parkway
- Auto Mall Parkway to South Grimmer Boulevard

Between Washington Boulevard and Auto Mall Parkway, Osgood Road is undivided, two lanes, and approximately 39 feet wide with a posted speed limit of 35 mph. South of Blacow Road, it is a two lane road with a two-way left-turn lane. The surrounding land uses include a church, business/office and commercial frontage. There are sidewalks and on-street parking along some portions throughout the segment. Traffic signals are located at the intersections of Washington Boulevard, Blacow Road, and Auto Mall Parkway. This segment of Osgood Road carries approximately 11,690 vehicles per day in the study area. A speed survey was conducted on March 26, 2008 and the 85<sup>th</sup> percentile speed was measured at 43.5 mph.

Between Auto Mall Parkway and South Grimmer Boulevard, Osgood Road is approximately 66 feet wide with a posted speed limit of 40 mph. Between Auto Mall Parkway and Skyway Court, it is a four lane divided roadway. Between Skyway Court and Prune Avenue, it is a four lane undivided roadway with a two-way left-turn lane. Between Prune Avenue and Grimmer Boulevard, it is a four lane undivided roadway. The surrounding land use is primarily commercial frontage. There are sidewalks along both sides of the street, but no on-street parking. There are traffic signals at Auto Mall Parkway, Wal-Mart Entrance, and South Grimmer Boulevard. This segment of Osgood Road carries approximately 13,900 vehicles per day in the study area. A speed survey was conducted on March 27, 2008 and the 85<sup>th</sup> percentile speed was measured at 43.7 mph.

### **Comments and Recommendations**

The collision rates for both segments of Osgood Road were below the expected rate for this type of road.

Between Washington Boulevard and Auto Mall Parkway, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit. However, the 10 mph pace is from 35 mph to 44 mph and the suggested speed limit is just above this range. Due to the 10 mph pace, a downgrading of the 85<sup>th</sup> percentile





speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 40 mph, increased from the existing speed limit of 35 mph.

Between Auto Mall Parkway and South Grimmer Boulevard, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit. The 10 mph pace is from 35 mph to 44 mph. Due to the 10 mph pace, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain 40 mph.



## Overacker Avenue between Mowry Avenue and Walnut Avenue

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Mowry Avenue	Walnut Avenue	30 mph	30 mph	36.1 mph	1	1.82

### **Conditions**

This segment of Overacker Avenue is approximately 27 feet wide, striped for two lanes, and undivided with a posted speed limit of 30 mph. The surrounding land use is primarily non-fronting residential neighborhoods. There is a sharp horizontal curve close to Mowry Avenue with a warning speed limit sign of 10 mph. The west side of the roadway has portions with sidewalk and on-street parking. A railroad track runs parallel to Overacker Avenue, on the east side of the road. Overacker Avenue carries approximately 840 vehicles per day in the study area. A speed survey was conducted on April 18, 2008 and the 85<sup>th</sup> percentile speed was measured at 36.1 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 35 mph speed limit. The 10 mph pace is from 29 mph to 38 mph. However, based on the sharp horizontal curve and residential neighborhoods, downgrading the 85<sup>th</sup> percentile by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain 30 mph.



## Pacific Commons Boulevard between Auto Mall Parkway and Curie Street

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Auto Mall Parkway	Curie Street	25 mph	30 mph	32.0 mph	0	0

### **Conditions**

This segment of Pacific Commons Boulevard has two travel lanes in the northbound direction and one travel lane in the southbound direction separated by a 3' raised median. The overall width of this straight roadway is approximately 66 feet. The posted speed limit is 25 mph. The surrounding land use is primarily commercial frontage and the roadway provides access from within the Pacific Commons retail center to Auto Mall Parkway. There are sidewalks along both sides of the street, but on-street parking is not permitted. There is a traffic signal at Auto Mall Parkway. Pacific Commons Boulevard carries approximately 9,800 vehicles per day in the study area. A speed survey was conducted on March 27, 2008 and the 85<sup>th</sup> percentile speed was measured at 32.0 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 30 mph speed limit and the collision rate is below the expected rate for this road type. The 10 mph pace is from 23 mph to 32 mph. Therefore, it is recommended that the posted speed limit be 30 mph, increased from the current speed limit of 25 mph.



### Page Avenue between Kato Road and Milmont Drive

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Kato Road	Milmont Drive	35 mph	30 mph	28.1 mph	0	0

#### **Conditions**

Page Avenue is approximately 44 feet wide, striped for two lanes, and undivided with a posted speed limit of 35 mph. The surrounding land use is primarily commercial frontage. There are sidewalks along both sides of the street. Page Avenue is a very short segment and ends with a sharp ninety degree curve at Milmont Drive, which has a 10 mph warning sign. Although on-street parking is not permitted, there were a high amount of parked cars along the street segment. Page Avenue carries approximately 960 vehicles per day in the study area. A speed survey was conducted on May 12, 2008 and the 85<sup>th</sup> percentile speed was measured at 28.1 mph.

#### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 30 mph speed limit and the collision rate is below the expected rate for this road type. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit be 30 mph, reduced from the current speed limit of 35 mph.

## Paseo Padre Parkway between City Limits and Curtner Road

<i><b>Segment From:</b></i>	<i><b>To:</b></i>	<i><b>Posted Limits:</b></i>	<i><b>Proposed Limits:</b></i>	<i><b>85<sup>th</sup> Percentile Speeds:</b></i>	<i><b>Num. of Collisions</b></i>	<i><b>Collision Rate (ACC/MVM):</b></i>
City Limits	Ardenwood Boulevard	45 mph	45 mph	51.5 mph	3	0.20
Ardenwood Boulevard	Fremont Boulevard	40 mph	40 mph	43.0 mph	10	0.50
Fremont Boulevard	Decoto Road	40 mph	40 mph	43.1 mph	22	0.93
Decoto Road	Thornton Avenue	40 mph	45 mph	49.4 mph	11	0.25
Thornton Avenue	Peralta Boulevard	40 mph	45 mph	47.7 mph	13	0.47
Peralta Boulevard	Mowry Avenue	35 mph	35 mph	41.1 mph	16	0.65
Mowry Avenue	Stevenson Boulevard	35 mph	35 mph	34.5 mph	13	0.62
Stevenson Boulevard	Driscoll Road	35 mph	35 mph	41.0 mph	17	0.36
Driscoll Road	Washington Boulevard	30 mph	35 mph	41.0 mph	4	0.28
Washington Boulevard	Quema Drive	30 mph	35 mph	40.0 mph	1	0.43
Quema Drive	Durham Road	30 mph	35 mph	41.1 mph	3	0.39
Durham Road	Grimmer Boulevard	30 mph	35 mph	38.8 mph	3	0.20
Grimmer Boulevard	Mission Boulevard	30 mph	35 mph	39.9 mph	0	0
Mission Boulevard	Curtner Road	30 mph	30 mph	37.0 mph	2	0.73

### **Conditions**

For the purpose of this study, Paseo Padre Parkway was separated into fourteen (14) segments:

- City limits to Ardenwood Boulevard
- Ardenwood Boulevard to Fremont Boulevard
- Fremont Boulevard to Decoto Road
- Decoto Road to Thornton Avenue
- Thornton Avenue to Peralta Boulevard

- Peralta Boulevard to Mowry Avenue
- Mowry Avenue to Stevenson Boulevard
- Stevenson Boulevard to Driscoll Road
- Driscoll Road to Washington Boulevard
- Washington Boulevard to Quema Drive
- Quema Drive to Durham Road
- Durham Road to Grimmer Boulevard
- Grimmer Boulevard to Mission Boulevard
- Mission Boulevard to Curtner Road

Between the city limits and Ardenwood Boulevard, Paseo Padre Parkway is divided, four lanes, and approximately 79 feet wide with a posted speed limit of 45 mph. There are sidewalks located on the east side of the street. There are bike lanes, several unsignalized pedestrian crossings along the corridor, but on-street parking is not permitted. The surrounding land use is commercial, open space and nearby Coyote Hills Regional Park. There is moderate bike activity along this corridor. There is a traffic signal at its intersection with Ardenwood Boulevard. This segment of Paseo Padre Parkway carries approximately 8,990 vehicles per day in the study area. A speed survey was conducted on March 5, 2008 and the 85<sup>th</sup> percentile speed was measured at 51.5 mph.

Between Ardenwood Boulevard and Fremont Boulevard, Paseo Padre Parkway is divided, four lanes, and approximately 72 feet wide. The posted speed limit is 40 mph, except for a 35 mph section between Deep Creek Road and I-880. There are sidewalks and bike lanes along the corridor, but on-street parking is not permitted. The surrounding land use is primarily non-fronting residential neighborhoods except between Siward Drive and Dunsmuir Common, where the surrounding land use is fronting residential neighborhoods. Bridges are located between Tupelo Street and Dunsmuir Common where the street crosses the railroad tracks and between Siward Drive and Blackstone Way where the street crosses Interstate I-880. There are vertical curves at the bridges. There are traffic signals at Ardenwood Boulevard, Deep Creek Road, Siward Drive, and Fremont Boulevard, including an un-activated signal at Tupelo Street. This segment of Paseo Padre Parkway carries approximately 11,040 vehicles per day in the study area. A speed survey was conducted on March 19, 2008 and the 85<sup>th</sup> percentile speed was measured at 43.0 mph.

Between Fremont Boulevard and Decoto Road, Paseo Padre Parkway is divided, four lanes, and approximately 78 feet wide with a posted speed limit of 40 mph. There are sidewalks and bike lanes along the corridor. On-street parking is not permitted along the corridor except near Milton Street where on-street parking is permitted only on one side of the street. There is a horizontal curve in the middle of the segment. The surrounding land use is primarily non-fronting residential neighborhoods, with a church located between Fremont Boulevard and Milton Street and an adjacent park located north of Milton Street. There are traffic signals at Fremont Boulevard, Milton Street, Chaucer Drive, Warwick Road, and Decoto Road. This segment of Paseo Padre Parkway carries approximately 18,970 vehicles per day in the study area. A speed survey was conducted on March 5, 2008 and the 85<sup>th</sup> percentile speed was measured at 43.1 mph.

Between Decoto Road and Thornton Avenue, Paseo Padre Parkway is divided and approximately 104 feet wide with a posted speed limit of 40 mph. This segment is generally a six-lane roadway, but is four lanes between Cornish Drive and Isherwood Way. There are sidewalks and bike lanes along the corridor, but on-street parking is not permitted. The surrounding land use is primarily non-fronting residential neighborhoods. Alameda Creek runs along the northern side of Paseo Padre Parkway near Isherwood Way. There are traffic signals at Decoto Road and Isherwood Way. This segment of Paseo Padre Parkway carries approximately 27,690 vehicles per day in the study area. A speed survey was conducted on March 5, 2008 and the 85<sup>th</sup> percentile speed was measured at 49.4 mph.

Between Thornton Avenue and Peralta Boulevard, Paseo Padre Parkway is divided, four lanes, and approximately 76 feet wide with a posted speed limit of 40 mph. There are sidewalks along the corridor. On-street parking is not permitted along this segment. There are bike lanes on both sides along most of the segment. The surrounding land use is primarily non-fronting residential neighborhoods. There are traffic signals at Thornton Avenue and Sequoia Road. This segment of Paseo Padre Parkway carries approximately 30,520 vehicles per day in the study area. A speed survey was conducted on March 5, 2008 and the 85<sup>th</sup> percentile speed was measured at 47.7 mph.

Between Peralta Boulevard and Mowry Avenue, Paseo Padre Parkway is divided, four lanes, and approximately 78 feet wide with a posted speed limit of 35 mph. There are sidewalks along the corridor and on-street parking is allowed on the southbound travel (i.e., west side of street) side between Eggers and Country Drive where there is fronting residential, and there is moderate pedestrian activity along the segment. There are bike lanes on both sides of the road except for the parking area between Eggers Drive and Country Drive. The surrounding land use is primarily non-fronting residential neighborhoods. There are traffic signals at Peralta Boulevard, Eggers Drive, Country Drive, and Mowry Avenue. This segment of Paseo Padre Parkway carries approximately 28,520 vehicles per day in the study area. A speed survey was conducted on March 5, 2008 and the 85<sup>th</sup> percentile speed was measured at 41.1 mph.

Between Mowry Avenue and Stevenson Boulevard, Paseo Padre Parkway is divided, six lanes, and approximately 102 feet wide with a posted speed limit of 35 mph. There are sidewalks and bike lanes along the corridor. On-street parking is only allowed on the southbound travel side between Capitol Avenue and Raley's Driveway. The surrounding land use is primarily commercial. There are traffic signals at Capitol Avenue, Princeton Plaza, Walnut Avenue, and Stevenson Boulevard. There are a few driveways which serve the commercial uses. This segment of Paseo Padre Parkway carries approximately 26,490 vehicles per day in the study area. A speed survey was conducted on March 6, 2008 and the 85<sup>th</sup> percentile speed was measured at 34.5 mph.

Between Stevenson Boulevard and Driscoll Road, Paseo Padre Parkway is approximately 73 feet wide with various lane configurations. Between Stevenson Boulevard and Sailway Drive, it is a six-lane divided roadway. Between 650' south of Sailway Drive and Grimmer Boulevard, it is a four-lane divided roadway. Between Grimmer Boulevard and Gomes Road, it is a two-lane divided roadway due to construction. East of Gomes Road, it is a four-lane divided roadway. The posted speed limit is 35 mph throughout the corridor. There are sidewalks along on both

sides of the street. On-street parking is permitted on the south side of the corridor along some segments. The surrounding land use is primarily non-fronting residential neighborhoods with Central Park located along the north side of Paseo Padre Parkway between Stevenson Boulevard and Grimmer Boulevard. There are several horizontal curves along this roadway. There is a pedestrian crossing adjacent to the park located at Rockett Drive and Baylis Street, and pedestrian activity is high. There are traffic signals at Stevenson Boulevard, Sailway Drive, Mission View Drive, Grimmer Boulevard, Gomes Road, and Driscoll Road. This segment of Paseo Padre Parkway carries approximately 27,380 vehicles per day in the study area. A speed survey was conducted on March 6, 2008 and the 85<sup>th</sup> percentile speed was measured at 41.0 mph.

Between Driscoll Road and Washington Boulevard, Paseo Padre Parkway is divided, four lanes, and approximately 78 feet wide with a posted speed limit of 30 mph. There are sidewalks located on both sides of the street along the entire segment. On-street parking is permitted between I-680 and Driscoll Road. The surrounding land use is primarily fronting residential, with commercial uses at the northeast corner of the Paseo Padre Parkway intersection with Driscoll Road. There are several horizontal curves along this roadway. There are pedestrian crossings at Covington Drive, Mento Drive, and Dorne Place. Pedestrian activity is high along the segment and there are numerous driveways which serve the residential uses throughout the corridor. There are traffic signals at Driscoll Road, Chadbourne Drive, and Washington Boulevard. This segment of Paseo Padre Parkway carries approximately 11,540 vehicles per day in the study area. A speed survey was conducted on March 6, 2008 and the 85<sup>th</sup> percentile speed was measured at 41.0 mph.

Between Washington Boulevard and Quema Drive, Paseo Padre Parkway is approximately 86 feet wide with a posted speed limit of 30 mph. This segment is a two-lane divided roadway between Washington Boulevard and Poda Court. Between Poda Court and Quema Drive, it is a two-lane undivided road with a two-way turn lane. There are sidewalks and bike lanes on both sides of the street and on-street parking is permitted. The surrounding land use is primarily fronting residential. There is a traffic signal at Washington Boulevard, and there are many driveways which serve the residential uses throughout the corridor. This segment of Paseo Padre Parkway carries approximately 7,760 vehicles per day in the study area. A speed survey was conducted on March 6, 2008 and the 85<sup>th</sup> percentile speed was measured at 40.0 mph.

Between Quema Drive and Durham Road, Paseo Padre Parkway is undivided and is approximately 44 feet wide with a posted speed limit of 30 mph. This segment is two lanes, with a two-way turn lane between Vista Del Mar and Pine Street. There are sidewalks along the east side of the street. Furthermore, there are bike lanes on both sides of the street, but on-street parking is not permitted. The surrounding land use is primarily non-fronting residential neighborhoods. There are several horizontal and vertical curves along this roadway. There is a traffic signal at Durham Road. This segment of Paseo Padre Parkway carries approximately 5,420 vehicles per day in the study area. A speed survey was conducted on March 20, 2008 and the 85<sup>th</sup> percentile speed was measured at 41.1 mph.

Between Durham Road and Grimmer Boulevard, Paseo Padre Parkway is divided, two lanes, and approximately 56 feet wide with a posted speed limit of 30 mph. There are sidewalks and bike lanes along both sides of the street and on-street parking is not permitted. The surrounding land



use is primarily non-fronting residential neighborhoods. Arroyo Agua Caliente Park is located south of Parkmeadow Drive. There are several horizontal and vertical curves along this roadway. There is a four-way stop at Grimmer Boulevard. This segment of Paseo Padre Parkway carries approximately 3,930 vehicles per day in the study area. A speed survey was conducted on March 20, 2008 and the 85<sup>th</sup> percentile speed was measured at 38.8 mph.

Between Grimmer Boulevard and Mission Boulevard, Paseo Padre Parkway is divided, four lanes, and approximately 76 feet wide with a posted speed limit of 30 mph. There are sidewalks and bike lanes along both sides of the street, but on-street parking is not permitted. There are several horizontal and vertical curves along this roadway. The surrounding land use is primarily non-fronting residential neighborhoods. An elementary school is located just south of Grimmer Boulevard. There is a traffic signal at Mission Boulevard. This segment of Paseo Padre Parkway carries approximately 3,660 vehicles per day in the study area. A speed survey was conducted on March 20, 2008 and the 85<sup>th</sup> percentile speed was measured at 39.9 mph.

Between Mission Boulevard and Curtner Road, Paseo Padre Parkway is divided, four lanes, and approximately 78 feet wide with a posted speed limit of 30 mph. There are several horizontal curves along this roadway. The surrounding land use is primarily fronting residential. There is sidewalk and on-street parking on both sides of the street. There is a traffic signal at Mission Boulevard and all-way stop controlled intersections at Sundance Drive and Curtner Road. This segment of Paseo Padre Parkway carries approximately 4,130 vehicles per day in the study area. A speed survey was conducted on March 20, 2008 and the 85<sup>th</sup> percentile speed was measured at 37.0 mph.

### **Comments and Recommendations**

The collision rates for all segments of Paseo Padre Parkway were below the expected rate for this type of road.

Between the City limits and Ardenwood Boulevard, the 85<sup>th</sup> percentile speed suggests a 50 mph speed limit. The 10 mph pace is from 43 mph to 52 mph. Based on the moderate bike activity, several unsignalized pedestrian crossings and proximity to the Coyote Hills Regional Park, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain 45 mph.

Between Ardenwood Boulevard and Fremont Boulevard, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit. However, the suggested speed limit does not fall within the 10 mph pace (from 32 mph to 42 mph). Based on the 10 mph pace and residential frontage, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain 40 mph.

Between Fremont Boulevard and Decoto Road, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit. The 10 mph pace is from 36 mph to 45 mph. Based on the horizontal curve in this section and moderate to high pedestrian activity due to the park, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain 40 mph.

Between Decoto Road and Thornton Avenue, the 85<sup>th</sup> percentile speed suggests a 50 mph speed limit. The 10 mph pace is from 41 mph to 50 mph. However, due to the speed limit of the adjacent segments on both sides, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 45 mph, increased from the current speed limit of 40 mph.

Between Thornton Avenue and Peralta Boulevard, the 85<sup>th</sup> percentile speed suggests a 50 mph speed limit. However, the suggested speed limit does not fall within the 10 mph pace (from 40 mph to 49 mph). Based on the 10 mph pace, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 45 mph, increased from the current speed limit of 40 mph.

Between Peralta Boulevard and Mowry Avenue, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit. The 10 mph pace is from 35 mph to 44 mph. However, based on the moderate pedestrian activity, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain 35 mph.

Between Mowry Avenue and Stevenson Boulevard, the 85<sup>th</sup> percentile speed suggests a 35 mph speed limit. The 10 mph pace is from 26 mph to 35 mph. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit remain at 35 mph.

Between Stevenson Boulevard and Driscoll Road, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit. The 10 mph pace is from 32 mph to 41 mph. Due to the high pedestrian activity, and location of a nearby park, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain at 35 mph.

Between Driscoll Road and Washington Boulevard, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit. The 10 mph pace is from 30 mph to 39 mph, and the suggested speed limit is above this range. Due to the 10 mph pace, high pedestrian activity, residential density, and roadway curvature, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 35 mph, increased from the existing speed limit of 30 mph.

Between Washington Boulevard and Quema Drive, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit. The 10 mph pace is from 31 mph to 40 mph. However, based on residential frontages, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 35 mph, increased from the existing speed limit of 30 mph.

Between Quema Drive and Durham Road, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit. The 10 mph pace is from 32 mph to 41 mph. However, based on the horizontal and vertical curves, the location of nearby park and to be consistent with the adjacent segment, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 35 mph, increased from the existing speed limit of 30 mph.



Between Durham Road and Grimmer Boulevard, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit. The 10 mph pace is from 32 mph to 41 mph. Based on the horizontal and vertical curvature of the roadway, and to be consistent with the adjacent segments, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 35 mph, increased from the current speed limit of 30 mph.

Between Grimmer Boulevard and Mission Boulevard, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit. The 10 mph pace is from 33 mph to 42 mph. However, pedestrian activity in this area is high due to the adjacent school. Also, several horizontal and vertical curves are located along this segment. Due to the high pedestrian activity and curvature of the roadway, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 35 mph, increased from the current speed limit of 30 mph.

Between Mission Boulevard and Curtner Road, the 85<sup>th</sup> percentile speed suggests a 35 mph speed limit. The 10 mph pace is from 28 mph to 37 mph. However, based on the horizontal curves and residential frontage, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain 30 mph.



### **Peralta Boulevard between Fremont Boulevard and Dusterberry Way**

<i><b>Segment From:</b></i>	<i><b>To:</b></i>	<i><b>Posted Limit:</b></i>	<i><b>Proposed Limit:</b></i>	<i><b>85<sup>th</sup> Percentile Speed:</b></i>	<i><b>Num. of Collisions</b></i>	<i><b>Collision Rate (ACC/MVM):</b></i>
Fremont Boulevard	Dusterberry Way	30 mph	35 mph	34.7 mph	4	1.28

#### **Conditions**

Peralta Boulevard is approximately 60 feet wide, striped for four lanes, and undivided with a posted speed limit of 30 mph. The surrounding land use is primarily commercial frontage. There are sidewalks and on-street parking on both sides of the street. Furthermore, there is moderate pedestrian activity along this segment of Peralta Boulevard. There are traffic signals at Fremont Boulevard and Dusterberry Way as well as an all-way stop at Maple Street. This segment of Peralta Boulevard carries approximately 8,260 vehicles per day in the study area. A speed survey was conducted on April 2, 2008 and the 85<sup>th</sup> percentile speed was measured at 34.7 mph.

#### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 35 mph speed limit and the collision rate is below the expected rate for this road type. The 10 mph pace is from 27 mph to 36 mph, so the suggested speed limit falls within that range. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit be 35 mph, increased from the existing speed limit of 30 mph.



### Pickering Avenue between Mission Boulevard and Easterly End

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Mission Boulevard	Easterly End	30 mph	25 mph	38.3 mph	0	0

#### **Conditions**

Pickering Avenue is approximately 36 feet wide, striped for two lanes, and undivided with a posted speed limit of 30 mph. There are sidewalks and bike lanes along both sides of the street and on-street parking is not permitted. A bridge is located between Pickering Court and Tierra Street. The surrounding land use is fronting residential. Due to the roadway width and residential density, this roadway is considered a local street. There is a traffic signal at Mission Boulevard and an all-way stop at Canyon Heights Drive. Pickering Avenue carries approximately 3,470 vehicles per day in the study area. A speed survey was conducted on April 2, 2008 and the 85<sup>th</sup> percentile speed was measured at 38.3 mph.

#### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 40 mph speed limit and the collision rate is below the expected rate for this road type. The 10 mph pace is 31 mph to 40 mph. Due to the roadway width (40 feet or under) and the residential density, this roadway can be considered a local street and posted 25 mph. Therefore, it is recommended that the posted speed limit be 25 mph, decreased from the current speed limit of 30 mph.



## Pine Street between Ibero Way and Sabercat Road

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Ibero Way	Paseo Padre Parkway	30 mph	30 mph	36.0 mph	1	0.98
Paseo Padre Parkway	Sabercat Road	25 mph	30 mph	31.3 mph	1	0.50

### **Conditions**

For the purpose of this study, Pine Street was separated into two (2) segments:

- Ibero Way to Paseo Padre Parkway
- Paseo Padre Parkway to Sabercat Road

Between Ibero Way and Paseo Padre Parkway, Pine Street is an undivided, two lane road with a two-way left-turn lane, and approximately 59 feet wide with a posted speed limit of 30 mph. There are sidewalks located along the south side of the street and on-street parking is not permitted. The surrounding land use is non-fronting residential neighborhoods. A park is located at the southwest corner of the Pine Street intersection with Ibero Way and there is moderate to high pedestrian activity. There are several horizontal and vertical curves along this roadway. The Paseo Padre Parkway intersection with Ibero Way is all-way stop controlled. This segment of Pine Street carries approximately 2,990 vehicles per day in the study area. A speed survey was conducted on April 3, 2008 and the 85<sup>th</sup> percentile speed was measured at 36.0 mph.

Between Paseo Padre Parkway and Sabercat Road, Pine Street is undivided, two lanes, and approximately 35 feet wide with a posted speed limit of 25 mph. There are 20 mph warning signs posted on curves. There are sidewalks along the north side of the street and on-street parking is not permitted. The surrounding land use is primarily non-fronting residential neighborhoods. There are several horizontal and vertical curves along this segment. This segment of Pine Street carries approximately 1,410 vehicles per day in the study area. A speed survey was conducted on April 3, 2008 and the 85<sup>th</sup> percentile speed was measured at 31.3 mph.

### **Comments and Recommendations**

The collision rates for both segments of Pine Street were below the expected rate for this type of road.

Between Ibero Way and Paseo Padre Parkway the 85<sup>th</sup> percentile speed suggests a 35 mph speed limit. The 10 mph pace is 29 mph to 38 mph. However, based on the moderate to high pedestrian activity due to the park and residential neighborhoods, as well as the horizontal and vertical curves, a downgrading of the 85th percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain 30 mph.



Between Paseo Padre Parkway and Sabercat Road, the 85<sup>th</sup> percentile speed suggests a 30 mph speed limit. The 10 mph pace is 22 mph to 31 mph. Therefore, it is recommended that the posted speed limit be 30 mph, increased from the current speed limit of 25 mph.



## Rancho Arroyo Parkway between Niles Boulevard and Riviera Drive

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Niles Boulevard	Riviera Drive	30 mph	30 mph	33.0 mph	3	3.98

### **Conditions**

This segment of Rancho Arroyo Parkway is approximately 64 feet wide with a posted speed limit of 30 mph. Between Niles Boulevard and De Vallee Court, it is a four lane undivided street. Between De Valle Court and Riviera Drive, it is a four-lane divided street. There are sidewalks located along the east side of the street and on-street parking is not permitted. The surrounding land use is non-fronting residential neighborhoods. Rancho Arroyo Parkway carries approximately 2,580 vehicles per day in the study area. A speed survey was conducted on April 1, 2008 and the 85<sup>th</sup> percentile speed was measured at 33.0 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 35 mph speed limit and the collision rate was higher than expected. The 10 mph pace is 27 to 36 mph. Based on the collision rate, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain 30 mph.





### Sabercat Road between Durham Road and Northerly End

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Durham Road	Northerly End	35 mph	40 mph	42.7 mph	4	2.26

#### **Conditions**

This segment of Sabercat Road is approximately 33 feet wide, striped for two lanes, and undivided with a posted speed limit of 35 mph. There are no sidewalks or bike lanes, and on-street parking is not permitted. The surrounding land use is primarily open space, with residential uses at the north end of the street. There are several horizontal and vertical curves along this roadway. A signalized intersection is located at Durham Road. Sabercat Road carries approximately 1,560 vehicles per day in the study area. A speed survey was conducted on May 9, 2008 and the 85<sup>th</sup> percentile speed was measured at 42.7 mph.

#### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 45 mph speed limit and the 10 mph pace is 32 to 41 mph. There were four collisions reported on this roadway segment equating to a higher than expected collision rate. Also, the roadway contains several horizontal and vertical curves. Based on a high collision rate, the 10 mph pace speed, and curvature of the roadway, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 40 mph, increased from the current speed limit of 35 mph.



## Scott Creek Road between Warm Springs Boulevard and Easterly End

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Warm Springs Boulevard	Green Valley Road	40 mph	40 mph	45.7 mph	5	0.26
Green Valley Road	Easterly End	35 mph	35 mph	41.0 mph	3	4.74

### **Conditions**

For the purpose of this study, Scott Creek Road was separated into two (2) segments:

- Warm Springs Boulevard to Green Valley Road
- Green Valley Road to the easterly end

Between Warm Springs Boulevard and Green Valley Road, Scott Creek Road is approximately 88 feet wide with a posted speed limit of 40 mph. Between Warm Springs Boulevard and I-680, the road is four lanes with a two-way turn lane. Between I-680 and Green Valley Road, the road is a two-lane divided road. There are sidewalks and bike lanes along both sides of the street and on-street parking is not permitted. The surrounding land use is primarily non-fronting residential neighborhoods. Furthermore, a church is located north of Scott Creek Road, between the I-680 NB On-Ramp and Green Valley Road. There are several horizontal and vertical curves along this roadway. There is a signalized intersection at Warm Springs Boulevard. This segment of Scott Creek Road carries approximately 25,010 vehicles per day in the study area. A speed survey was conducted on May 12, 2008 and the 85<sup>th</sup> percentile speed was measured at 45.7 mph.

Between Green Valley Road and the easterly end, Scott Creek Road is undivided, three lanes, and approximately 40 feet wide with a posted speed limit of 35 mph. There are sidewalks located along the north side of the road and on-street parking is not permitted. The surrounding land use is non-fronting residential and open space. The road alignment contains many horizontal curves and a very steep upgrade to the east. This segment of Scott Creek Road carries approximately 940 vehicles per day in the study area. A speed survey was conducted on April 22, 2008 and the 85<sup>th</sup> percentile speed was measured at 41.0 mph.

### **Comments and Recommendations**

Between Warm Springs Boulevard and Green Valley Road, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit and the collision rate is below the expected rate for this road type. The 10 mph pace is from 36 mph to 45 mph, with the suggested speed limit at the upper end of that range. Based on the horizontal and vertical curves along the roadway and bike lanes/activity, a downgrading the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain 40 mph.



Between Green Valley Road and the easterly end, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit. However, there were three (3) collisions reported on this roadway segment equating to a higher than expected collision rate. In addition, this segment contains a very steep vertical curve. Based on a higher than expected collision rate and the curvature of the road, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain 35 mph.



## Shinn Street between Peralta Boulevard and Von Euw Common

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Peralta Boulevard	Von Euw Common	25 mph	30 mph	33.0 mph	1	2.77

### **Conditions**

Shinn Street is approximately 40 feet wide, striped for two lanes, and undivided with a posted speed limit of 25 mph. There are sidewalks along both sides of the street between Gilbert Place and Peralta Boulevard. On-street parking is not permitted and a bike route begins north of Peralta Boulevard. Land use around the segment is industrial to the north and residential to the south. Shinn Street carries approximately 1,140 vehicles per day in the study area. A speed survey was conducted on April 21, 2008 and the 85<sup>th</sup> percentile speed was measured at 33.0 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 35 mph speed limit. However, the suggested speed limit does not fall within the 10 mph pace (from 22 mph to 31 mph). Based on the 10 mph pace, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 30 mph, increased from the current speed limit of 25 mph.



### State Street between Mowry Avenue and Beacon Avenue

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Mowry Avenue	Beacon Avenue	30 mph	30 mph	34.2 mph	2	1.70

#### **Conditions**

State Street is approximately 46 feet wide with a posted speed limit of 30 mph. Between Mowry Avenue and Capitol Avenue, it is a five-lane undivided roadway, with three lanes westbound. Between Capitol Avenue and Beacon Avenue, it is a four-lane undivided roadway. There are sidewalks along both sides of the street and on-street parking is not permitted. The surrounding land use is primarily commercial, with scattered non-fronting residential. A signalized intersection is located at Mowry Avenue. State Street carries approximately 3,680 vehicles per day in the study area. A speed survey was conducted on April 2, 2008 and the 85<sup>th</sup> percentile speed was measured at 34.2 mph.

#### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 35 mph speed limit and the collision rate is below the expected rate for this road type. The 10 mph pace is 25 mph to 34 mph and the suggested speed limit is above that range. Based on the 10 mph pace, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain at 30 mph.

## Stevenson Boulevard between Mission Boulevard and Westerly End

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Mission Boulevard	Civic Center Drive	35 mph	40 mph	43.1 mph	3	0.15
Civic Center Drive	Fremont Boulevard	35 mph	40 mph	40.0 mph	22	1.01
Fremont Boulevard	Blacow Road	35 mph	40 mph	38.6 mph	33	0.89
Blacow Road	Interstate 880	35 mph	40 mph	39.8 mph	36	1.48
Interstate 880	Westerly End	30/40 mph	40 mph	42.0 mph	11	0.26

### **Conditions**

For the purpose of this study, Stevenson Boulevard was separated into five (5) segments:

- Mission Boulevard to Civic Center Drive
- Civic Center Drive to Fremont Boulevard
- Fremont Boulevard to Blacow Road
- Blacow Road to Interstate 880
- Interstate 880 to Westerly End

Between Mission Boulevard and Civic Center Drive, Stevenson Boulevard is divided, four lanes, and approximately 96 feet wide with a posted speed limit of 35 mph. There are sidewalks and bike lanes along both sides of the street and on-street parking is not permitted. The surrounding land use is primarily non-fronting multi-family residential and California School for the Deaf and the Blind. Fremont Central Park is located south of Stevenson Boulevard, between Civic Center Drive and Gallaudet Drive. A railroad crossing with gates is located between Gallaudet Drive and Stevenson Place. Pedestrian activity and bicycle activity are moderate due to the nearby park. There are traffic signals at Civic Center Drive, Guardino Drive, Gallaudet Drive, and Mission Boulevard. This segment of Stevenson Boulevard carries approximately 18,180 vehicles per day in the study area. A speed survey was conducted on March 5, 2008 and the 85<sup>th</sup> percentile speed was measured at 43.1 mph.

Between Civic Center Drive and Fremont Boulevard, Stevenson Boulevard is divided, six lanes, and approximately 107 feet wide with a posted speed limit of 35 mph. There are sidewalks on both sides of the street and on-street parking is not permitted. The surrounding land use is primarily non-fronting residential neighborhoods and commercial. There are several horizontal curves along this segment. There are traffic signals at Fremont Boulevard, Leslie Street, Liberty

Street, Paseo Padre Parkway, and Civic Center Drive. This segment of Stevenson Boulevard carries approximately 24,620 vehicles per day in the study area. A speed survey was conducted on March 6, 2008 and the 85<sup>th</sup> percentile speed was measured at 40.0 mph.

Between Fremont Boulevard and Blacow Road, Stevenson Boulevard is divided, four lanes, and approximately 72 feet wide with a posted speed limit of 35 mph. There are sidewalks along both sides of the street and on-street parking is not permitted. The surrounding land use is primarily non-fronting residential neighborhoods and commercial. There are traffic signals at Blacow Road, Sundale Drive, Besco Drive, Davis Street, and Fremont Boulevard. This segment of Stevenson Boulevard carries approximately 33,800 vehicles per day in the study area. A speed survey was conducted on March 5, 2008 and the 85<sup>th</sup> percentile speed was measured at 38.6 mph.

Between Blacow Road and I-880, Stevenson Boulevard is divided, six lanes, and approximately 86 feet wide with a posted speed limit of 35 mph. There are sidewalks along both sides of the street and on-street parking is not permitted. There are bike lanes between I-880 and Marietta Drive. The surrounding land use is primarily commercial. There are traffic signals at the I-880 ramps, Omar Street, and Blacow Road. This segment of Stevenson Boulevard carries approximately 45,360 vehicles per day in the study area. A speed survey was conducted on March 6, 2008 and the 85<sup>th</sup> percentile speed was measured at 39.8 mph.

Between I-880 and the westerly end, Stevenson Boulevard is approximately 115 feet wide. West of Eureka Drive, it is a two lane divided roadway with a posted speed limit of 30 mph. Between Eureka Drive and Cherry Street, it is a four lane divided roadway with a posted speed limit of 30 mph. Between I-880 and Cherry Street, it is a six lane divided roadway with a posted speed limit of 40 mph. There are sidewalks along both sides of the street and bike lanes only between Cherry Street and the westerly end. On-street parking is not permitted throughout the roadway. There are several vertical curves along this roadway. The surrounding land use is primarily commercial with scattered non-fronting residential neighborhoods. There are traffic signals at Cherry Street, Cedar Boulevard, Albrae Street, and the I-880 ramps. Road conditions are sub-standard west of Eureka Drive. This segment of Stevenson Boulevard carries approximately 21,320 vehicles per day in the study area. A speed survey was conducted on March 6, 2008 and the 85<sup>th</sup> percentile speed was measured at 42.0 mph.

### **Comments and Recommendations**

The collision rates for all segments of Stevenson Boulevard were below the expected rate for this type of road.

Between Mission Boulevard and Civic Center Drive, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit. The 10 mph pace is from 34 mph to 43 mph. Due to the moderate pedestrian activity, nearby park and the California School for the Deaf and the Blind, and to be consistent with adjacent segments speeds, the downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 40 mph, increased from the existing speed limit of 35 mph.



Between Civic Center Drive and Fremont Boulevard, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit. The 10 mph pace is from 31 mph to 40 mph. Therefore, it is recommended that the posted speed limit be 40 mph, increased from the current speed limit of 35 mph.

Between Fremont Boulevard and Blacow Road, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit. The 10 mph pace is from 30 mph to 39 mph. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit be 40 mph, increased from the current speed limit of 35 mph.

Between Blacow Road and I-880, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit. The 10 mph pace is from 31 mph to 40 mph. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit be 40 mph, increased from the current speed limit of 35 mph.

Between I-880 and the westerly end, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit. The 10 mph pace is from 32 mph to 41 mph. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit be 40 mph, increased from the existing speed limit of 30 mph from Cherry Street to westerly end and the same as the current speed limit of 40 mph from Interstate 880 to Cherry Street.





### **Sundale Drive between Liberty Street and Fremont Boulevard**

<i><b>Segment From:</b></i>	<i><b>To:</b></i>	<i><b>Posted Limit:</b></i>	<i><b>Proposed Limit:</b></i>	<i><b>85<sup>th</sup> Percentile Speeds:</b></i>	<i><b>Num. of Collisions</b></i>	<i><b>Collision Rate (ACC/MVM):</b></i>
Liberty Street	Fremont Boulevard	30 mph	30 mph	37.0 mph	3	3.16

#### **Conditions**

This segment of Sundale Drive is approximately 62 feet wide, striped for four lanes, and undivided with a posted speed limit of 30 mph. Sidewalks are located along both sides of the street. On-street parking is permitted on most of the segment. The surrounding land use is fronting apartments and business/office with open spaces. There is a traffic signal at Fremont Boulevard. Sundale Drive carries approximately 2,710 vehicles per day in the study area. A speed survey was conducted on May 5, 2008 and the 85<sup>th</sup> percentile speed was measured at 37.0 mph.

#### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 35 mph speed limit. The collision rate is above the expected rate for this type of road and the 10 mph pace is 28 mph to 37 mph. However, based on the higher than expected collision rate, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain 30 mph.



## Technology Drive between Auto Mall Parkway and Grimmer Boulevard

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Auto Mall Parkway	Grimmer Boulevard	25 mph	30 mph	36.0 mph	0	0

### **Conditions**

Technology Drive is approximately 44 feet wide, striped for two lanes, and undivided with a posted speed limit of 25 mph. There are no sidewalks or bike lanes along the roadway. However, there is moderate pedestrian activity and a crosswalk is located between Solar Way and Grimmer Boulevard. There is on-street parking between Technology Place and Grimmer Boulevard. The surrounding land use around the segment is business/office. There are traffic signals at Auto Mall Parkway and Grimmer Boulevard. Technology carries approximately 1,380 vehicles per day in the study area. A speed survey was conducted on May 7, 2008 and the 85<sup>th</sup> percentile speed was measured at 36.0 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 35 mph speed limit and the collision rate is below the expected rate for this road type. The 10 mph pace is from 27 mph to 36 mph. Due to the moderate pedestrian activity without sidewalks, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 30 mph, increased from the current speed limit of 25 mph.



## Technology Place between Business Center Drive and Technology Drive

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Business Center Drive	Technology Drive	25 mph	30 mph	28.3 mph	0	0

### **Conditions**

Technology Place is approximately 44 feet wide, striped for two lanes with a two-way turn lane, and undivided with a posted speed limit is 25 mph. There are sidewalks along both sides of the street and on-street parking is not permitted. The surrounding land use is business/office and open space. There is a stop at Technology Drive. Technology Place carries approximately 1,870 vehicles per day in the study area. A speed survey was conducted on May 6, 2008 and the 85<sup>th</sup> percentile speed was measured at 28.3 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 30 mph speed limit and the collision rate is below the expected rate for this road type. The 10 mph pace is from 20 mph to 29 mph. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit be 30 mph, increased from the existing speed limit of 25 mph.



## Thornton Avenue between Fremont Boulevard and Paseo Padre Parkway

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Fremont Boulevard	Paseo Padre Parkway	30 mph	35 mph	34.7 mph	4	0.44

### **Conditions**

This segment of Thornton Avenue is 44 to 60 feet wide and has various lane configurations. Between Fremont Boulevard and Paseo Padre Parkway, the roadway is a four-lane divided roadway with a posted speed limit of 30 mph. There are sidewalks and bike lanes along both sides of the street. There is on-street parking near Post Street. The surrounding land use around the segment is primarily commercial at the western end of the roadway and non-fronting residential at the eastern end of the roadway. There are traffic signals at Fremont Boulevard, Moraine Street, and Paseo Padre Parkway. Thornton Avenue carries approximately 17,630 vehicles per day in the study area. A speed survey was conducted on April 17, 2008 and the 85<sup>th</sup> percentile speed was measured at 34.7 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 35 mph speed limit and the collision rate is below the expected rate for this road type. The 10 mph pace is 27 mph to 36 mph. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit be 35 mph, increased from the current speed limit of 30 mph.

## Vargas Road between Interstate 680 and 550' North of Pico Road

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Interstate 680	550' North of Pico Road	30 mph	35 mph	37.1 mph	0	0
550' North of Pico Road	Morrison Canyon Road	25 mph	25 mph	31.4 mph	0	0

### **Conditions**

For the purpose of this study, Vargas Road was separated into two (2) segments:

- Interstate 680 to 550' North of Pico Road
- 550' North of Pico Road to Morrison Canyon Road

Between I-680 and 550' north of Pico Road, Vargas Road varies from an undivided one-lane roadway at the northern end, to an undivided two-lane roadway at the southern end. The posted speed limit is 30 mph and the road is approximately 37 feet wide. There are several horizontal and vertical curves along this roadway. The surrounding land use is primarily open space with scattered low density residential. Road conditions are poor and there are some driveways. This segment of Vargas Road carries approximately 130 vehicles per day in the study area. A speed survey was conducted on April 22, 2008 and the 85<sup>th</sup> percentile speed was measured at 37.1 mph.

Between 550' north of Pico Road and Morrison Canyon Road, Vargas Road is undivided, unstriped, and approximately 14 feet wide with a posted speed limit of 25 mph, with 20 mph warning signs at the horizontal curves. There are several horizontal and vertical curves along this roadway. The surrounding land use is primarily open spaces. Road conditions are poor and a few driveways are present. This segment of Vargas Road carries approximately 90 vehicles per day in the study area. A speed survey was conducted on April 18, 2008 and the 85<sup>th</sup> percentile speed was measured at 31.4 mph.

### **Comments and Recommendations**

Between I-680 and 550' north of Pico Road, the 85<sup>th</sup> percentile speed suggests a 35 mph speed limit and the collision rate is below the expected rate for this road type. The 10 mph pace is 27 mph to 36 mph. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit be 35 mph, increased from the existing speed limit of 30 mph.

Between Morrison Canyon Road and 550' north of Pico Road, the 85<sup>th</sup> percentile speed suggests a 30 mph speed limit and the collision rate is below the expected rate for this road type. Due to the narrow roadway width and horizontal and vertical curves, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain 25 mph.

## Walnut Avenue between Argonaut Way and Mission Boulevard

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Argonaut Way	Fremont Boulevard	30 mph	30 mph	35.7 mph	13	3.08
Fremont Boulevard	Paseo Padre Parkway	35 mph	35 mph	35.0 mph	3	0.35
Paseo Padre Parkway	Mission Boulevard	35 mph	35 mph	39.5 mph	5	0.26

### **Conditions**

For the purpose of this study, Walnut Avenue was separated into three (3) segments:

- Argonaut Way to Fremont Boulevard
- Fremont Boulevard to Paseo Padre Parkway
- Paseo Padre parkway to Mission Boulevard

Between Argonaut Way and Fremont Boulevard, Walnut Avenue is mostly undivided, approximately 72 feet wide, and four lanes with a two-way turn lane between Fremont Boulevard and Ross Common. The posted speed limit is 30 mph. There are sidewalks and on-street parking is not permitted along both sides of the street. There are bike lanes on both sides of the street except a segment between Argonaut Way and Target/Food Max Driveways. The surrounding land use is primarily commercial with multi-family residential uses at the southern end of the roadway. There is a traffic signal at Fremont Boulevard. This segment of Walnut Avenue carries approximately 14,960 vehicles per day in the study area. A speed survey was conducted on March 15, 2008 and the 85<sup>th</sup> percentile speed was measured at 35.7 mph.

Between Fremont Boulevard and Paseo Padre Parkway, Walnut Avenue is divided, four lanes, and approximately 66 feet wide with a posted speed limit of 35 mph. There are sidewalks and bike lanes along both sides of the street and on-street parking is not permitted. The surrounding land use is primarily commercial. There are traffic signals at Paseo Padre Parkway, Liberty Street, and Fremont Boulevard. This segment of Walnut Avenue carries approximately 15,390 vehicles per day in the study area. A speed survey was conducted on May 13, 2008 and the 85<sup>th</sup> percentile speed was measured at 35.0 mph.

Between Paseo Padre Parkway and Mission Boulevard, Walnut Avenue is divided, four lanes, and approximately 77 feet wide with a posted speed limit of 35 mph. There are sidewalks and bike lanes along both sides of the street, and limited on-street parking is permitted between Cherry Court and Langtry Court. There are several horizontal curves along this roadway. The surrounding land use is primarily non-fronting residential neighborhoods. A Bay Area Rapid Transit (BART) station is located at the northwest corner of the Walnut Avenue intersection with Civic Center Drive and California School for the Deaf and the Blind is located northeast of

Gallaudet Drive. There is high pedestrian activity due to the nearby Fremont BART station. There are traffic signals at Paseo Padre Parkway, Civic Center Drive, BART Way, Guardino Drive, Gallaudet Drive, and Mission Boulevard. This segment of Walnut Avenue carries approximately 13,410 vehicles per day in the study area. A speed survey was conducted on May 13, 2008 and the 85<sup>th</sup> percentile speed was measured at 39.5 mph.

### **Comments and Recommendations**

Between Argonaut Way and Fremont Boulevard, the 85<sup>th</sup> percentile speed suggests a 35 mph speed limit and the collision rate is higher than the expected rate for this type of road. Based on the higher than expected collision rate, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain 30 mph.

Between Fremont Boulevard and Paseo Padre Parkway, the 85<sup>th</sup> percentile speed suggests a 35 mph speed limit and the collision rate is below the expected rate for this road type. Therefore, based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit remain at 35 mph.

Between Paseo Padre Parkway and Mission Boulevard, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit. The 10 mph pace ranges from 31 mph to 40 mph and the recommended speed is at the upper end of that range. Based on the 10 mph pace, high pedestrian activity, and close proximity of the segment to the California School for the Deaf and the Blind, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain at 35 mph.

## Warm Springs Boulevard between South Grimmer Boulevard and City Limits

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
South Grimmer Boulevard	Warren Avenue	40 mph	40 mph	41.7 mph	16	0.51
Warren Avenue	City Limit	45 mph	45 mph	48.0 mph	6	0.14

### **Conditions**

For the purpose of this study, Warm Springs Boulevard was separated into two (2) segments:

- South Grimmer Boulevard to Warren Avenue
- Warren Avenue to City Limits

Between South Grimmer Boulevard and Warren Avenue, Warm Springs Boulevard is approximately 53 feet wide and contains various lane configurations. The segment between South Grimmer Boulevard and just north of Reliance Way is a two lane undivided roadway. The segment just north of Reliance Way to Reliance Way is a two lane undivided roadway with a two-way left-turn lane. Between Reliance Way and Corporate Way, the roadway is a three lane undivided roadway with a two-way left-turn lane. The roadway between Corporate Way and Brown Road is a two lane divided roadway with a two-way turn lane. The section between Brown Road and Mission Court has three southbound and two northbound lanes with a two-way turn lane. The section between Mission Court and Mission Boulevard is a divided roadway with two lanes in the northbound direction and three lanes in the southbound direction. The section between Mission Boulevard and Warren Avenue is a divided roadway with three lanes in the northbound direction and two lanes in the southbound direction. The posted speed limit is 40 mph throughout the roadway segment. Bike lanes are present between Mission Boulevard and Warren Avenue; a bike route begins north of Mission Court. On-street parking is not permitted except on the dirt shoulder between South Grimmer Boulevard and Reliance Way. There is sidewalk along both sides of the street, except along the segment between South Grimmer Boulevard and Reliance Way. There are several horizontal curves along this roadway. The surrounding land use is primarily open space with commercial uses at the southern end. There are traffic signals at South Grimmer Boulevard, Mission Court, Mission Boulevard, and Warren Avenue. This segment of Warm Springs Boulevard carries approximately 20,610 vehicles per day in the study area. A speed survey was conducted on May 9, 2008 and the 85<sup>th</sup> percentile speed was measured at 41.7 mph.

Between Warren Avenue and the city limits, Warm Springs Boulevard is divided, four lanes, and approximately 79 feet wide with a posted speed limit of 45 mph. There is sidewalk along both sides of the street north of Tonopah Drive. There are bike lanes for the entire corridor and on-street parking is not permitted. The surrounding land use is primarily non-fronting residential neighborhoods on the east side and commercial on the west side. A church is located between



Mission Falls Lane and Pontiac Way, and a school and university are located on opposite sides of the street between Pontiac Way and Fourier Avenue. There are signalized intersections at Warren Avenue, Lippert Avenue, Gable Drive, Mayten Way, Tonopah Drive, and Kato Road. This segment of Warm Springs Boulevard carries approximately 19,840 vehicles per day in the study area. A speed survey was conducted on May 9, 2008 and the 85<sup>th</sup> percentile speed was measured at 48.0 mph.

### **Comments and Recommendations**

The collision rates for both segments of Warm Springs Boulevard were below the expected rate for this type of road.

Between South Grimmer Boulevard and Warren Avenue, the 85<sup>th</sup> percentile speed suggests a 40 mph speed limit and the collision rate is below the expected rate for this road type. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit remain at 40 mph.

Between Warren Avenue and the city limits, the 85<sup>th</sup> percentile speed suggests a 50 mph speed limit and the collision rate is below the expected rate for this road type. However, the 10 mph pace is from 39 mph to 48 mph and the suggested speed limit does not fall within this range. Since the speed limit should typically fall within the 10 mph pace, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain at 45 mph.



## East Warren Avenue between Warm Springs Boulevard and Curtner Road

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Warm Springs Boulevard	Curtner Road	35 mph	35 mph	41.8 mph	2	0.38

### **Conditions**

Between Warm Springs Boulevard and Curtner Road, East Warren Avenue is approximately 85 feet wide and contains various lane configurations. The section between Warm Springs Boulevard and Fernald Street is mostly an undivided four lane roadway. The segment between Fernald Street and Bradley Street is a undivided four lane roadway with a two-way left turn lane. The posted speed limit is 35 mph. There are sidewalks on both sides of the street from Warm Springs Boulevard to Fernald Street, but only along the north side of the street between Fernald Street and I-680. There are no bike lanes and parking is permitted along some sections. There is a church located between Chemult Common and Lundy Terrace and a school located between Fernald Street and Navajo Road, with an uncontrolled pedestrian school crossing at Bradley Street. There are several vertical and horizontal curves along this roadway. The surrounding land use is primarily non-fronting residential neighborhoods. There are traffic signals at Warm Springs Boulevard and Fernald Street. There are all-way stop controlled intersections at Yakima Drive and Curtner Road. This segment of Warren Avenue carries approximately 4,560 vehicles per day in the study area. A speed survey was conducted on May 12, 2008 and the 85<sup>th</sup> percentile speed was measured at 41.8 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 40 mph speed limit and the collision rate is below the expected rate for this road type. However, based on the horizontal and vertical curves along the segment, the residential neighborhoods, and the location of an uncontrolled school pedestrian crossing, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit remain 35 mph.



## West Warren Avenue between Interstate 880 and Fremont Boulevard

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limit:</i>	<i>Proposed Limit:</i>	<i>85<sup>th</sup> Percentile Speed:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Interstate 880	Fremont Boulevard	35 mph	35 mph	37.1 mph	0	0

### **Conditions**

Between I-880 and Fremont Boulevard, West Warren Avenue is undivided, four lanes with a two-way left turn lane, and approximately 68 feet wide with a posted speed limit of 35 mph. There are no bike lanes along this segment and on-street parking is not permitted. There is a horizontal curve located between Fremont Boulevard and Bayside Parkway. The surrounding land use is primarily industrial. A traffic signal is located at Fremont Boulevard and all-way stop controlled intersections are located at Bayside Parkway and Lakeview Boulevard. The I-880 on-ramp, northeast of Lakeview Boulevard, was temporarily closed for construction at the time of this survey. This segment of Warren Avenue carries approximately 4,030 vehicles per day in the study area. A speed survey was conducted on May 8, 2008 and the 85<sup>th</sup> percentile speed was measured at 37.1 mph.

### **Comments and Recommendations**

The 85<sup>th</sup> percentile speed suggests a 35 mph speed limit and there have been no collisions on this segment in the past three years. Based on the 85<sup>th</sup> percentile speed, it is recommended that the posted speed limit remain at 35 mph.

## Washington Boulevard between Driscoll Road and Mission Boulevard

<i>Segment From:</i>	<i>To:</i>	<i>Posted Limits:</i>	<i>Proposed Limits:</i>	<i>85<sup>th</sup> Percentile Speeds:</i>	<i>Num. of Collisions</i>	<i>Collision Rate (ACC/MVM):</i>
Driscoll Road	Paseo Padre Parkway	40/35 mph	40 mph	42.8 mph	13	0.73
Paseo Padre Parkway	Mission Boulevard	35 mph	40 mph	42.7 mph	5	0.49

### **Conditions**

For the purpose of this study, Washington Boulevard was separated into two (2) segments:

- Driscoll Road to Paseo Padre Parkway
- Paseo Padre Parkway to Mission Boulevard

Between Driscoll Road and Paseo Padre Parkway, Washington Boulevard is divided and four lanes, except between Osgood Road and Olive Avenue, which is undivided. The road is approximately 66 feet wide with a varying speed limit along the corridor. Between Olive Avenue and I-680, the posted speed limit is 40 mph. Between I-680 and Paseo Padre Parkway, the posted speed limit is 35 mph. Two churches are located between Bruce Drive and Meredith Drive with on-street parking permitted. There are bike lanes along both sides of the street in the section between Olive Avenue and I-680 southbound ramps. Additionally, there are sidewalks along both sides of the street, except along the north side of Washington Boulevard between the I-680 ramps. There are several horizontal and vertical curves along this segment. The surrounding land use is primarily non-fronting residential neighborhoods. There are traffic signals at Osgood Road, Meredith Drive, I-680 on and off ramps, and Paseo Padre Parkway. This segment of Washington Boulevard carries approximately 14,760 vehicles per day in the study area. A speed survey was conducted on May 16, 2008 and the 85<sup>th</sup> percentile speed was measured at 42.8 mph.

Between Paseo Padre Parkway and Mission Boulevard, Washington Boulevard is approximately 77 feet wide undivided roadway with various lane configurations. Between Paseo Padre Parkway and Adelina Common, Washington Boulevard is a four lane undivided roadway with a two-way left-turn lane. Between Adelina Common and Jerome Avenue, there are two lanes in the westbound direction and one lane in the eastbound direction with a two-way left-turn lane. Between Jerome Avenue and Mission Boulevard, Washington Boulevard is an undivided two lane roadway with a two way turn lane. There is sidewalk along both sides of the street and on-street parking is permitted along some segments. A church is located between Palm Avenue and Gallegos Avenue, with no on-street parking permitted along either side of the street. A school is located between Bryant Terrace and Mission Boulevard. The posted speed limit along the segment is 35 mph. There are traffic signals at Paseo Padre Parkway and Mission Boulevard. The surrounding land use is primarily fronting residential with some mixed use between Paseo Padre Parkway and Gallegos Avenue. This segment of Washington Boulevard carries

approximately 11,900 vehicles per day in the study area. A speed survey was conducted on May 16, 2008 and the 85<sup>th</sup> percentile speed was measured at 42.7 mph.

### **Comments and Recommendations**

The collision rates for both segments of Washington Boulevard were below the expected rate for this type of road.

Between Driscoll Road and Paseo Padre Parkway, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit. However, the 10 mph pace is from 35 mph to 44 mph and the suggested speed limit is just above this range. Since the speed limit should typically fall within the 10 mph pace, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 40 mph.

Between Paseo Padre Parkway and Mission Boulevard, the 85<sup>th</sup> percentile speed suggests a 45 mph speed limit and the collision rate is below the expected rate for this road type. However, the 10 mph pace is from 33 mph to 42 mph and the suggested speed limit is above this range. Since the speed limit should typically fall within the 10 mph pace, a downgrading of the 85<sup>th</sup> percentile speed by 5 mph is justified. Therefore, it is recommended that the posted speed limit be 40 mph, increased from the current speed limit of 35 mph.